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YOUTHFUL

OLD AGE



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Youthful Old Age

HOW TO KEEP YOUNG

By

WALTER M. GALLICHAN

LONDON

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“Health is a very precious jewell, and the onely thing, than in pursuite of it deserveth, that a man should not onely employ time, labour, sweate and goods, but also life to get it; forasmuch as without it, life becommeth injurious unto us. Voluptuousneses, Science, and Vertue, without it tarnish and vanish away.”

—MONTAIGNE.

“Few people know how to be old.”

—LA ROCHEFOUCAULD.

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YOUTHFUL OLD AGE

Chapter I

The Young Old

MOST human beings over the age of fifty are apprehensive of the approaching disabilities and infirmities of old age. The stage of "senile decay" is dreaded, and the ugly word "decrepitude" suggests a picture of tottering feebleness, second childhood, and a loss of interest in living. Now to be healthy, useful and happy, though old, is the theme of this book. We are too apt to look upon the senescent period of life as an experience of chronic aches and pains, and a failure of the mental faculties. Our lives can be prolonged beyond "three-score years and ten," and the evening of our days made enjoyable by taking thought of the means of conserving our vitality.

Old age is a wearing out of the human machine. The heart pumps the blood at a diminished rate. The bones lose their resistant quality, and the muscles stiffen more quickly after exertion. The arteries tend to become hardened and brittle. The ageing man or woman finds it necessary to go slow in order

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to avoid fatigue. The zest of life is often lessened, and there is a resigned waiting for the end, or a dread of death. Depression of mind is a not infrequent symptom. The memory fails, and the brain is no longer keenly receptive to new ideas.

Such are some of the signs of senility or decay of body and mind. This closing chapter in the individual life-history is preceded by a more or less protracted stage of senescence, or gradual slowing down. Hints of this waning of vital energy are realized by many persons in early middle age. They begin to feel old, and to think about growing old and all that it implies. Those who are wise will begin to prepare for the autumn season of life during the spring of youth. But we are not taught when we are young how to preserve youth in the senescent stage. We go on digging our graves steadily with our knives and forks till almost suddenly, often at forty-five, we begin to degenerate prematurely. Instinct does not teach the civilized, educated man or woman how and what to eat. The animals in a natural state make no mistakes in diet. Man discovers edible substances by the reflective process of trial and error, and the errors have killed some men outright, and curtailed the lives of many others.

There is an element of luck or chance in longevity. That is to say, if you have the good fortune to be born of a long-living stock, your chance of living long is considerably higher than that of a man whose family is short-living. Pigmentation, or the colour of one's skin, is considered to be another

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determinant of long life, and according to researches, the fair people have a poorer chance of life than the dark. Probably the deeper pigmentation of women may account for the greater proportion of centenarians in the female sex than in the male.

That women have stronger tenacity of life than men is well proved. An enormous number of male children die before the age of three. "The constitutional youthfulness of women" protects them against many of the diseases that shorten the lives of men. Strange as it may appear, men are more frail than "the tender sex." Taking this fact into account, a much larger proportion of women than of men should live longer than is the case, and enjoy a fuller measure of health in their declining years. But most women, like the great mass of men, neglect the first principles of hygiene.

How can the deterioration of the body and mind of man be avoided in old age? This question is universal, and probably as old as man. How can one grow old without becoming senile and doddering, and exhibiting obvious indications of decay? If we could choose our parents the answer would be more simple. The long-lived procreate the long-lived. But the factor of heredity must not be over-rated. Nurture can work wonders. The creaking door may last longer than the sound one, if it is used with caution.

Normally, men and women ought to live to at least the age of ninety or a hundred, and die through a final slowing down of vital force. In a few instances

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this is what happens. In most cases civilized human beings rot out prematurely. And this unpleasant method of making an exit from life is generally accepted as inevitable. Length of life, if the body is perpetually tortured, is no boon. But presumably most of us would like to live to a ripe age, if health could be ensured. Why should a short life be the only merry one?

I believe that a fanatical faddism in diet and hygiene is as inimical to longevity and hale old age as utterly reckless living. We can become wrecks in middle age as readily through a stubborn asceticism as through excess in sensuality. We must discover the happy mean. I know a man of ninety, a life-long *bon vivant*, who resorts each night to his club, drinks three or four stiff whiskies, and smokes one or two cigars. All his adult life this veteran has defied most of the rules of health as laid down in the standard text-books. Apparently he enjoys life, and would like to prolong it indefinitely.

Young men who want to extract all the sensual enjoyment that life offers often point to this aged man-about-town, and say: "Look at old A—what's the matter with him? He has never worried about health, and he is getting on for a hundred." Quite so. But one old A does not prove that if all young fellows follow his example they will live to his age, and compare with him in vigour. The instance of old A merely shows that vitality is largely hereditary, and that certain individuals possess a remarkable power of resistance to the toxin of alcohol. Such

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immunity from the ill results of continuous heavy drinking and the absorption of poisons in the system is abnormal. Probably not a single one of the envious young men possesses such immunity, and if they emulated the old man's example, they would develop indurated livers, obesity, dyspepsia, and possibly die of broncho-pneumonia before attaining the age of fifty.

Conversely, it is folly to point to a dietetic crank, who in spite of his abstention from all animal foods, or the observance of an exclusive diet of nuts and bananas, contrives to seem healthy, and say: "Surely that must be the true road to health." The dietetic fanatic, like the reckless *bon vivant*, is often a physiological freak. He has a peculiar "gift" for being able to subsist on a diet that would starve the ordinary man. Nutritive idiosyncrasy varies very widely. One man's meat is another man's poison. It is this fact that food reformers often ignore.

In all the classic works that have been written on the subject of preserving health and prolonging life, great stress is laid upon *moderation*. And quite rightly. Nevertheless, moderation for one person may mean immoderation for another. It might be risky to advise a rapidly-growing, active lad to be "always moderate in eating." Frequently "moderation" is recommended in the ambiguous advice: "You can't go far wrong if you eat plain food, and *plenty of it*." Plenty of plain rice pudding, tapioca, cornflour, arrowroot, and white flour may be the

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very worst fare for certain persons, and under certain conditions.

In all strict counsels of moderation it is necessary to define specifically what is moderation and what is excess. What, for instance, do we mean by "a moderate drinker"? A physician would refer to "the dietetic quantity" as moderate. This would be half a bottle of light, white or red wine, or one glass of diluted whisky, or one pint of ale per diem. The definition of a moderate drinker, as given by a very large number of persons, would be one who absorbs daily three or four times the amount of wine or spirits prescribed as the dietetic quantity. An acquaintance of mine, who drinks on an average fifteen glasses of ale daily, calls himself a moderate drinker. Often the moderate drinker is described as the man who is never seen in a state of intoxication, though it is well known that the drinkers who never get drunk often consume ten times as much alcohol as the man who occasionally shows that he has imbibed a glass too much.

I don't advocate immoderation in anything. What I wish to expose is the ambiguity of generalizations about "excess." We Northerners are rather minatory about over-indulgence. It is perhaps a compensation for our constitutional tendency to excess. It is also probably derived from the Puritanic fear of all forms of sensual pleasure. Search the indexes of some of the standard medical text-books, and the only reference you will find to the second great human appetite will be: "Sexual excess."

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A measure of ascetic self-denial is good. So is an occasional high banquet, or an extra glass of wine. The supreme rule is to avoid extremes as a general habit. The gratification of the sense of taste, apart from the necessity of eating to live, tends to general well-being. Constant over-indulgence is costly to the body. It has to be paid for in physical discomfort, disease, and the shortening of life.

The principal causes of an infirm old age are auto-intoxication, the self-poisoning induced by neglecting to keep the alimentary tract clean, from the mouth to the bowel orifice, and neglect of regular suitable outdoor exercise. Over-work, worry, pecuniary anxiety and boredom are all important contributing factors of untimely ageing and senescent invalidism. Over-eating and drinking and wrong feeding kill innumerable thousands of the Western population. Most people, except the very poorest, on the borderline of starvation, eat more than their bodies need. Yet the big eater may be ill-nourished.

After forty-five, the temptation to gorge and guzzle is increased in many persons. The waning of sexual vigour is often accompanied by an exaggerated craving for the pleasures of the table. Gourmandizing, as Dr. Wilhelm Stekel points out, is one of the disguises of the love instinct. Women at the climacteric often indulge too freely in dishes containing an undue amount of tissue-building substance. Men of fifty stimulate an already hearty appetite in various ways; and through insufficient expenditure of the muscular

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energy required for burning up the excess of food, they become obese, and more inactive year by year.

Hereditary or acquired disease is another handicap upon the chance of a cheerful old age. A sensible young man, aware of a family tendency to a specific malady, will take every care to diminish the risk of a disabled senility. But only the few prepare for the future in youth, and the seeds of later illness are often sown in adolescence.

Need the aged valetudinarian despair? No. With due regard to hygiene and curative means, even the invalid of past sixty can mitigate his symptoms and find interest in life. It is hardly necessary to recount well-known examples of semi- or actual invalids, who have enriched the world with their labours in science, art, and literature.

"A new lease of life" is not a fiction. The recuperative power of the human body is marvellous. Many elderly people become, in a sense, rejuvenated through physical or psychic causes. A man of fifty-seven, suffering apparently from an incurable high blood pressure, marries again, and becomes physically transformed. Change of occupation from one that is monotonous and irksome to another that engrosses the interest, may restore animation to the dull and ailing man of three-score years or more. Rest from toil, when accompanied by absorbing enthusiasm for a hobby or recreation, may make the old young.

Many ancient trees, in the chronological sense, show no signs of old age when felled. Animals in their natural environment undoubtedly age, and

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finally perish; but the truly senile wild animal has not been found. Only man shows the true stigmata of senile decay, though it is true that the domesticated lower animals, living in artificial conditions, often exhibit signs of senile infirmity.

Men and women sexagenarians should be still young. If they are old, then senescence has overtaken them prematurely, and in a large degree they have only themselves to blame. Through want of knowledge, they have misused that wonderful piece of mechanism, the body of mankind. Yet they may still restore some of the vigour of youth. Rejuvenescence can triumph over senescence. Let health culture become the hobby of the old, and we shall hear much less of the penalties and pains of the senile age.

Disease is regarded as a necessary evil. It is unquestionably evil, but not necessary. Man, "the Crown of Creation," "the Masterpiece of Nature," has not learned the art of living. It is no exaggeration to state that only a few of us in the nations of culture know how to perform the common physiological acts. In nutrition and defecation, and in the fulfilment of the reproductive function, we are nearly all untaught. The result of our errors of apathy and ignorance are palpable in every section of the civilized communities. Senile decrepitude is the price paid by the vast host for sloth in matters of physical and mental hygiene.

THE ageing man or woman who notes, with more or less anxiety or alarm, the symptoms of the characteristic ailments of senescence, should know that no hard and fast general rules of healthy living can be set down as applicable in all individual cases. A correspondent to a daily newspaper wrote that one of his relatives drank a bottle of port every day, and lived to the age of eighty-five. The writer ascribed the health of his relative at a ripe age to the fact that he drank that quantity of port daily.

If we generalize on the advantages of taking port regularly, we are attempting to demonstrate that if everyone followed this practice, the race would be sounder and longer-lived. There is, however, no scientific evidence that a pint of port a day would be beneficial to the majority of persons. Such a quantity may not injure one man, but may seriously affect another.

Strawberries are excellent fruit, but persons liable to strawberry eczema may be made very ill through eating this fruit. Dried beans and peas are valuable

A FEW WORDS ON IDIOSYNCRASY

food, rich in protein and vitamin; but many ageing people cannot digest them. A man who assures me that he is well nourished and healthy on a diet of uncooked wheat and raw apples, imagines that if all men imitated him illness would cease. It is far more likely that the population would dwindle and die out rapidly.

We must reckon with idiosyncrasy in matters of diet and hygiene. We cannot all eat alike and exercise alike. There must be discriminating adaptation if we lay down hard and dogmatic principles of health. Some people are injured seriously by a lack of ventilation, while some are only slightly affected. Very vigorous exercise is essential for the health of one man, but not necessarily for his abnormal brother.

Broadly speaking, the man or woman over sixty years of age requires considerably less food than the man or woman of thirty. In childhood and youth we require ample food for the making of flesh and bone. At a mature age it is often ill-advised to put on flesh, and the system can no longer make bone. All the food that old sedentary folk need is a sufficient quantity to repair the daily wear and tear. There are exceptions, as in the case of elderly people who still use their physical strength in daily labour. The navvy at sixty requires more protein and carbohydrate than the solicitor or accountant of the same age.

The brain-worker, whose chief recreation is dining over well every day of his life, is exposed to many

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forms of digestive derangement, the risk of unwholesome corpulence, and premature old age. The sedentary sexagenarian must eat light and easily digested and assimilated foods, if he wishes to remain young in vigour and spirit. Besides the severe tax upon the digestive organs, there is, in the case of the hearty eater of sixty, a strain upon the nervous system.

Many old men and women tell us that overwork has hastened the signs of age. Very frequently we find that they have overworked in two ways, by occupation and by the constant ingestion of superfluous food. This is burning the candle at both ends. Severe mental or physical toil produces fatigue toxins in the body, and when other poisons, derived from a too generous diet, are superadded, disorder is inevitable.

I will deal now with the question of environment and its effect upon the aged. There is plenty of statistical evidence that a country life favours health in old age, and indeed at any age. The improved sanitation of the overcrowded towns and industrial centres only reduces the disease and mortality rate in a minor degree. Country air and country food are agents of health in middle age, and many business men who retire from the city to rural life undergo a remarkable recuperation, or revitalization.

I have a relative of seventy-six who suffered for years from a chronic catarrh of the nose, which seemed to be incurable. A few months residence in a mountainous district of North Wales banished

A FEW WORDS ON IDIOSYNCRASY

every trace of the ailment. Many persons, among both sexes, renew their youth when they change from a town to a country residence.

Nevertheless, it would be foolish to advise every man of sixty to live in the country after retiring from business. We can well believe that Dr. Johnson would have been bored intolerably in the country, and the chances are that his tendency to melancholy would have been strengthened. The town lover should remain in an urban environment. But the man who, like a friend of mine, finds London "poisonous," should, if he is able, turn his back upon the cities and seek the tranquillity of the countryside in his declining years.

In our advancing years surroundings count for more than they did in early manhood or womanhood. The man who has suffered secretly from nostalgia, or home sickness, has dreamt of returning to the place of his birth with eager yearning. If he can fulfil his longing it is probable that he will be happy, and that his chances of living to an advanced age will be much increased.

People who hate their environment cannot be as efficient, mentally and physically, as those who work in congenial surroundings. The realization of a hope of returning to the homeland from a foreign country has prolonged many lives. Nostalgia may become a mental disorder. It has been accounted a cause of insanity in some instances.

Old age, in the estimate of Zimmerman, the author of a classic monograph on "Solitude," is

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“perhaps the most agreeable condition of human life.” Zimmerman recommends periods of solitary living for the aged. This counsel would certainly be rejected by the gregarious types of men and women, who are rarely contented unless they are among the crowd. Great talkers are not happy without audiences. The taciturn, reflective, and reserved may find the highest contentment in a comparative state of solitude.

HUMAN beings are now omnivorous animals. We of the cultured races have passed through the stages of herb, nut, and berry eating, cannibalism, shellfish devouring, and the consumption of raw flesh. We still adhere to many forms of our primitive dietary. We eat raw oysters, almost rotten game, the fatty, unwholesome livers of geese, raw vegetables, birds' eggs, roots, fungi, and seaweed. We command a vast range of food substances. Yet we are mostly uninstructed in the first principles of feeding. And many persons grow very hot in a discussion upon a sane diet.

Most of the physical ills of life, and a considerable proportion of our spiritual trials, are the consequence of ignorance concerning how and what to eat. The science of dietetics is in its infancy. We are only just beginning to talk about a chair of dietetics in our universities. The huge majority of educated people sin physiologically every time they sit down to a meal.

A very large number of busy people bolt their food. Business men and women rarely leave

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a reasonable time between rising from bed and catching the train to business. They gulp down their coffee, and do not chew their food sufficiently, and after a hurried meal they rush to the station. Luncheon is often a feat of eating against time. Meals eaten at high pressure cause chronic dyspepsia, and its attendant nervous irritability or depression of mind.

Middle-aged persons of sedentary occupation require a light protein diet. Protein is a composition of carbon, oxygen, hydrogen, nitrogen, and sulphur. Some proteins are "good" in the nutritive sense, and some are "bad." White of egg is a typical pure protein. Meat, cheese, beans, peas, whole wheatmeal, fish, nuts, and many other animal and vegetable food substances contain protein.

Carbohydrate, or starch, is contained in sugar, grains, plant seeds, potatoes, rice, and cornflour. The starch foods are valuable, but they do not contain all the essentials of a balanced diet. Carbohydrate foods produce fuel for the human engine, and a considerable amount is necessary for the growing child, the ploughman, the athlete, and all persons who expend much muscular energy. A considerable quantity of energy is required for the absorption of the starchy foods. They undoubtedly give work to the intestines, for some of them are difficult to digest.

People of advanced years cannot afford to give undue labour to the digestive apparatus. They need easily digestible foods. Their force is often required

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to its full limit in daily labour, and they have scanty reserve energy for the superadded task of digesting certain kinds of carbohydrate food. It is scarcely possible, nor is it advisable, to exclude starch from the diet of old age. The question is, "What is the best kind of starch food?" I regard white flour, polished rice, tapioca, cornflour, and sago as very unsuitable staple food at any age. I shall have more to say on this matter in the chapter on vitamins.

A third requisite in the dietary of the old is fat. The word "fat" is almost invariably associated with meat fat; but fat exists in butter, margarine, milk, olive oil, and nuts. Broadly speaking, we need about three ounces of fat daily. An excess of fat, especially in hot weather, is injurious at any age. Fat contains more than twice the number of calories (heat-yielding matter) than starch. But an attempt to live on fat alone would be fatal.

Salt in dietetics means something more than table salt. Children need lime salts for the making of bones and teeth. Old people often require iron salts for the blood. Many of the white grain foods contain none of the salts essential for health.

The staple food of this country is bread. In the old days, before the craze for white flour, the bread of the people merited its description as "the staff of life." To-day our "staple food" is hardly to be classed as food. White flour bread is lacking in nutrients and vitamin. A bread and butter diet is literally a starvation diet. Dogs, rats, and mice soon starve on a dietary of ordinary baker's bread.

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One sack of wholemeal flour is about equal to twelve sacks of "milled," white, devitalized flour.

In a grain of wheat the germ is rich in protein and fat, and the endosperm also contains proteins. The bran, or envelope, consists of cellulose and mineral salt. In the making of bread from superfine white flour the most vital parts of the grain are wasted. Vitamin B, that great factor of health, is lost. Yet there are people who imagine that bread is a perfect food. My advice to the ageing is: "Avoid bread, puddings and pastry made from white flour."

The heat units necessary for the upkeep and repair of the human body after the age of sixty vary from 2,500 to 4,000 a day. A man of that age, still employed in hard muscular work, may require the higher quantity. But the calorie does not tell us everything about diet, valuable as the calorimeter is. You may get the calories and miss some of the vitamins.

We may take it that a banker of seventy often gets far too many calories per day, while his charwoman of that age does not get nearly enough. Food requirements vary with occupation, climate, and age.

In my sixty-seventh year my dietary is variable. I have no hard and fast rules based on the due daily proportions of protein, carbohydrate, and fat; but I know from experience that, when leading an active life out of doors, I can eat, digest, and assimilate twice as much food as when I am writing several hours daily. "Anyone with the least common-sense knows that" may be your comment. But I contend

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that though a great number of persons know that the greater the output of energy the greater the quantity of fuel required, they are apt to forget that the smaller the expenditure of energy the smaller the amount of food required.

Eating is unquestionably the favourite recreation of many persons of both sexes in middle and old age. In every club and hotel dining-room you will see stout, florid men, with signs of indigestion and plethora, working their way steadily through all the courses from the soup to the savoury, and complimenting themselves on the heartiness of their appetites. All civilized people tend to eat too much. The temptations to gorging are many. New and inviting dishes are continually introduced by expert chefs, and the æsthetics of the dinner table are fillips to appetite. Aperitives, sauces, spices, and what-not are used to whip up desire for food among people who have never experienced a keen primitive hunger in the whole of their lives. It must be repeated that heavy feeders may suffer from malnutrition.

I have seen extremely fat, grossly over-nourished, middle-aged rich people eat a big omelette, made of four eggs, as a final snack after a seven-course dinner, preceded by two cocktails. People who over-eat in this reckless manner might be suspected as victims of an inordinate craving for food, or bulimia. Modified forms of this disease are fairly common. Some persons eat habitually about twice as much food as their systems require. At every spa and hydro in Europe and America you will see

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many people who have become chronic invalids through intemperance in eating.

The dietary of late middle-age and senescence need not be Spartan. Nature has given us taste buds in the tongue for pleasurable gratification in the act of feeding, and the healthy man enjoys his meals. Many tasty dishes are fairly easily digested, but many are not. A high animal protein diet should be avoided when the wheels of life are beginning to show signs of wear. Three meals a day are quite enough, and some persons would be younger at sixty-five if they ate only twice in the twenty-four hours.

Let the sexagenarian begin the day by drinking from half a pint to one pint of water, cold in the height of summer, if preferred, but warm in winter. This is an important hygienic practice for persons of all ages, and it is especially beneficial in the later stage of life. Water is better than the customary small cup of tea. But nothing will persuade some people to drink plain water. A mild form of hydrophobia is quite common.

Breakfast should be a moderately light meal, unless the daily labour is coal-heaving, digging, or any other severe exercise for the muscles. Persons who wish to avoid obesity cannot eat a lad's meal of porridge and bacon and eggs with impunity. Thin, nervously-constituted persons need more fat than the stout persons. For the average man or woman over sixty there is a wide range of breakfast foods, but the majority seem content with the conventional bacon

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and egg all the year round. On alternate mornings a fried sole, plaice, or fresh herring may be eaten with advantage, if animal food is desired.

Some fresh fruit or a raw vegetable should be eaten with breakfast. We all eat too much cooked food, and there is good reason for believing that the discovery of cooking has proved a mixed blessing for humanity. Undoubtedly, cooking destroys some of the essential food accessories known as vitamins. I recommend fresh lettuce leaves, or water-cress, as part of the breakfast menu. The quantity taken need not be more than a few sprigs of water-cress. An apple or an orange should form the breakfast dessert. The virtue of orange juice is not sufficiently recognized. For infants and the old alike, it is invaluable. Wholemeal bread and butter, fruit, and half a pint of milk, just warmed, but not boiled, is a sufficient breakfast meal for the sedentary aged man or woman. If, however, this early morning fare is not considered a "man's breakfast," there is no reason why eggs, fish, or bacon should not be substituted. But the green leaves and the fruit should be eaten also.

Foods to avoid at breakfast, or any other time, are hot rolls made of white flour, new white bread, much porridge, and tinned meats. The question of fluids will be discussed in another chapter. I will say here that I regard tea and coffee in moderation as useful beverages for the old.

The mid-day meal may consist of meat, fish, or fowl, if animal food is considered necessary, with a milk pudding and stewed fruit. Personally, I prefer

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a Welsh rabbit, an omelette, a cheese soufflé, and brown bread and butter to cold lamb, pork, ham, or tongue for luncheon. Cheese has a much higher nutritive value than lean butcher's meat, and is easily digested, if properly chewed. The reason why many persons declare that cheese "does not agree" with them is because they only eat it at the close of a hearty dinner. I know a man who boasts that he can always eat about four ounces of cheese after a good dinner. That quantity of cheese alone contains practically all the protein that is needed for one full meal.

The chief meal of the day should be dinner. Again, I would emphasize the fact that meat is not an essential part of diet. There are plenty of dairy-product substitutes for beef, pork, and mutton, and they contain more protein and vitamin in most instances. Bacon and pork fat have no vitamin A, and tapioca pudding has no vitamin B. Herrings, salmon, and mackerel excel lean beef in nutrients and vitamin. The yolk of an egg is rich in vitamin A, but there is none in lard or ordinary vegetable oil margarine.

Butcher's meat is a protein food; but fattened, stall-fed bullocks are frequently unhealthy. Meat is subject to putrefaction in the digestive apparatus, and gastric catarrh and other evils have been traced to meat-eating. If the flesh of oxen, sheep, and pigs is craved, it should be eaten only once a day, and in very moderate amount. An ageing man or woman does not require fourteen ounces of meat per

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day, the quantity said to be necessary for a labouring man.

If an elderly man finds life a misery without meat, let him eat it very moderately. Stewing is the best form of cooking meat, and frying is the worst.

An artificially-fattened capon is, to my mind, a far less wholesome creature than a partridge or a wild duck. As I have said, there is a wide range of animal food, excluding butcher's meat.

Milk, eggs, butter, cheese, fish, fowl, and game provide ample wholesome food for man. I have no use for the fatted ox and the obese pig. I would choose a trout from the brook, a ptarmigan from the mountains, or a hare from the downs, if I hungered for animal food.

In regard to vegetables it should be understood that boiling destroys the vitamins and salts, and that raw leaves and roots are better than cooked. Grated carrots, celery and radishes make a tasty salad, with oil and lemon juice, or Florence cream, as a dressing. If garden vegetables, such as cabbage and spinach, are steamed instead of boiled, the greater part of their virtue is retained. Carbonate of soda, added to the water in which green vegetables are cooked, destroys the useful vitamin completely.

THE orthodox minimum quantity of liquid required by the human body daily is three pints. I am of the opinion that the ageing man or woman will benefit by drinking four to five pints or more each day, chiefly of pure water. Morning and night, a copious draught of water is a preventive of constipation, and often the only laxative that is needed for regular bowel action. Water is a much neglected drink. It is thoroughly disliked by a large number of our population, who only drink it when very thirsty and unable to obtain any other kind of liquid.

If plain water is distasteful it may be flavoured with lemon or lime juice, fruit syrup, or barley. Manufactured mineral waters are not equal to pure water as wholesome disease-counteracting fluids. Some of the natural mineral waters are, however, beneficial in old age. Plentiful water drinking lowers blood pressure in old persons.

Beer has been the staple beverage of Englishmen for centuries. Sir Arbuthnot Lane states that ale is a wholesome and necessary food for the British race. At middle age many men declare that they are no

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longer able to drink beer, and the reasons generally given are that malt liquors affect the liver and cause dyspepsia and acidity in the blood. Beer brewed from malt and hops is a wholesome and, to some extent, a nourishing beverage. Roughly speaking, a pint of good ale has about as much food value as an ordinary slice of bread.

We are told that the modern chemist can make ale without malt, and it is difficult to say when we are drinking the real thing. Malt contains sugar, but beer can be made from other sugar-containing grains, from glucose extracted from potatoes, rice, and maize. The capacity for digesting beer is a matter of age and idiosyncrasy.

Ale has a stimulating effect upon the secretion of saliva, and for that reason it may be said to aid in the preliminary task of digestion. It also tends to heighten appetite, if used in moderation, and causes an increased flow of gastric juice.

The acid in stout is greater than in beer, and persons subject to rheumatism or gout should use this beverage very sparingly—if at all. For people living an inactive life, and those who have reached middle age especially, beer is not always to be recommended. Alcohol and starch produce fat in many persons, and heavy beer-drinkers are frequently corpulent. Active, thin, old people who use their muscles can often drink ale with impunity.

The strongest, and probably the most "feeding," beer is Burton. Lager beer and bitter ale are more suitable in many cases than the darker and more

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sugars, and for this reason they are generally a better and safer drink in old age than beer or stout. "In persons of advanced life the circulation is often feeble, and a moderate allowance of alcohol often appears to be beneficial," wrote Dr. Charles Murchison.

We should not look upon alcohol as a true elixir of life. Nor should we regard it as a pernicious poison to be avoided at all times. The total abstainer is a healthier man than the bar-lounger who "nips" regularly; but it is a controversial question whether the abstainer is healthier, by reason of abstinence alone, than the moderate drinker.

That chronic excess in drinking intensifies all the signs of advancing age, and shortens life, is unquestionably true. How many men of fifty are seen daily in the streets of any of our cities, who bear plain traces of premature old age attributable to heavy drinking. Although inebriety is said to be lessening, there are an enormous number of steady toppers in Great Britain, men and women who are on the borderline of pathological alcoholism. The regular free drinker boasts that he never gets drunk. He might be healthier if he did. An occasional orgy is far less harmful than persistent tippling.

Wine that maketh glad the heart of man is one of the good things of life, and its use is often valuable in senescence. Most persons of later middle age, who have been accustomed to wine, anxiously ask the doctor if a little port will do them any harm. A

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little port does very few people harm. But port is often taken after a meal that has included aperitives, light wine, and champagne. The old must drink port with discretion.

The ageing often "knock off port," because they fear an excess of sugar. According to Anstie, one would need to drink wine to the point of intoxication to consume about half an ounce of sugar. In a "sweet" wine there is about four per cent. of sugar. There is much less sugar in port than in old marsala or champagne. In clarets there is scarcely any. In sauterne there is about half the quantity that there is in sherry. So a fear of sugar need not deter an old man or woman from indulging in an occasional glass of port.

The fortified wines, such as sherry and port, are more alcoholic than the natural wines, and must be used more sparingly by the old. Hock is a good wine for the middle-aged, and it is not more acid than claret. Italian wines generally contain more acid than the French clarets. Red wines tend in some persons to cause constipation, and fortified wines may produce dyspepsia and gout. It is a good rule to use only one kind of wine daily, and not to take spirits after drinking port or sherry. Table wines should have a low percentage of alcohol.

Thin persons who need a fattening diet will find a sound red wine useful, but the over-stout should be extremely sparing of wine or spirits, and they will be better without any alcoholic beverages.

Cider is a wholesome drink, and it is believed that

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regular cider drinkers frequently avoid rheumatism. Cider is a good old-age beverage in the warm months. It contains about the same percentage of alcohol as ordinary ale.

Gin is usually considered the purest of the spirituous liquors. It is used largely nowadays in the making of cocktails and appetizers. Like other spirits, gin has very little acid. Brandy is extremely valuable in some of the disorders of old age, but it should be used medicinally and in small quantities. Probably the best brandy is old cognac, or liqueur brandy. In certain fevers doses of brandy are frequently the means of saving life, and it may prove useful in diabetes.

Of all the non-alcoholic beverages used in this country tea is the most popular in all classes. William Cobbett inveighed against "tea slops," and advised a return to home-brewed ale; and many diatribes have been written in condemnation of tea-drinking. Some people testify that abstention from tea has relieved their rheumatic symptoms, and dyspeptics may be advised to drink tea weak and sparingly. I have found tea useful in spurts of mental labour in late middle age, and more beneficial than alcohol as a brain stimulant, when concentration is essential. Most people make tea rather too strong, and drink it too hot. I suspect that the constant irritation of scalding tea upon the membrane of the stomach may induce cancer in that organ. If it does not produce so serious a disease, it unquestionably causes indigestion and stomach

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catarrhs. There are cases of neuralgia and headache that may be relieved by a cup of strong tea; but the habitual drinking of strong tea must be condemned.

Tea addicts are found in all classes, and the results of excess are notable in Wales and some of the mining and industrial regions of Great Britain. The ill effects of intemperate tea-drinking are numerous. Caffeine is a poison that exists in both coffee and tea, and it is highly injurious when absorbed in undue quantities. Persistent indigestion and inflammation of internal membranes are often the result of the excessive drinking of strong tea. Disturbance of the nervous system, biliousness, and sleeplessness are frequent symptoms in tea drunkards. Caffeine has an action upon the heart, and causes palpitation. It may in some cases induce nervous tremors, vertigo, and headache.

Having indicated the risks of excess in tea-drinking, I will say that I regard tea as one of the blessings of civilization. It is a mild and wholesome stimulant, in moderation, and useful as a restorative in old age. Frequent tea-drinking between meals is a bad practice, and tea should not be taken with meat meals. It should be drunk at a temperature a very little above normal blood heat. No animal but man scalds and blisters his throat, stomach, and intestines with hot drinks.

Coffee is not a very safe drink for an aged dyspeptic or a highly nervous subject. The effects of immoderate coffee-drinking are depressing to the heart and nerves, and productive of dyspeptic

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trouble. Many people suffer from slight bilious symptoms every day after the morning pint of strong coffee. Donizetti, the composer, used to stimulate his flagging brain with fifteen pints of coffee in a day. He died in a mental hospital. But coffee in moderation is a sound enough beverage for old men and women who are not troubled with biliousness or insomnia. As a teetotal night-cap, after the age of sixty-five, a cup of cocoa, made with milk, is better than the same quantity of coffee.

Experiments made by Fraser showed that coffee assisted in the digestion of ham and eggs, and reduced the tendency to flatulence, which tea often induces. Both tea and coffee often banish a sense of fatigue of the nerves, and they are therefore useful as restoratives. As foods they are quite valueless, though many people imagine that they "keep up the strength."

I began this chapter with a recommendation of pure water, and I will now repeat it. Flush the stomach and bowels daily by hot or cold water-drinking, in addition to the use of other beverages. Make this a diurnal practice as sacred as a ritual.

To sum up briefly the question of alcoholic drink and health, I will quote a few statements from "The Action of Alcohol on Man," a composite volume by Professor Starling, Sir Frederick Mott, Dr. Raymond Pearl and Dr. Hutchison.

"Alcohol has a certain power of replacement for carbohydrate and fat foods." "Alcohol when administered in moderation can act as a foodstuff."

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“ Alcohol is without doubt a food.” “ It is an easily absorbed and assimilable food.” Alcohol adds to “ the pleasant taste and enjoyment of food.”

“ In the aged,” states Dr. Hutchison, “ it is often a great aid with meals.”

In convalescence alcohol is “ often of the greatest help in improving appetite and digestive power, and so bringing the patient back to normal health.”

THE discovery of vitamins has increased immensely the chances of youthful old age. We know now that certain accessory substances in diet, in infinitely small quantities, make all the difference between malnutrition and inanition, susceptibility to disease and power of resistance. We have learned that life can be prolonged and the worst ills of the senile stage banished by a balanced dietary containing a necessary, though infinitesimal, quantity of the vital essences. The study of vitamins is bringing about a revolution in diet, and great changes in the medical treatment of several maladies.

The principal vitamins are known as A, B, and C. D and E have also been added to the original trio. Old men and women need vitamin A, which is found in butter, egg yolk, fish roe, some of the internal organs of animals, such as liver and heart, meat fat, milk, herring, salmon, wholemeal flour, and green vegetables in a raw state. If our fat food is composed chiefly of margarine from vegetable oils, olive oil, lard, pork and ham, we are not getting vitamin A.

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If a senescent of either sex eats chiefly white bread, and puddings made of white flour, tapioca, polished rice, cornflour and sugar, he or she misses vitamin B, which is contained in wholemeal flour, dried peas, beans, lentils, liver, sweetbread, kidney, egg yolk, garden roots, onions, and especially in yeast extracts.

Vitamin C is in fruit in the major quantity, and in a less degree in yellow turnips, carrots, apples, milk, cabbage, potatoes. The best vitamin C fruit is probably the tomato. But oranges, lemons and grape-fruit are rich in it. The articles of ordinary diet that are quite deficient in vitamin C are dried fruits, over-cooked fruits, jams, jellies, over-boiled milk, and grapes.

If the question is asked: "What are the diseases that can be prevented by the use of vitamins in due proportion?" the answer should be "Most."

It is proved beyond any doubt that mortal and ravaging maladies have been banished almost miraculously by substituting vitamin for non-vitamin foods. Bad nourishment is a chief cause of the juvenile disease of rickets, and this means an absence of vitamin A. Deficient supply of milk for children is a prime cause of the vast number of our C₃ population, and the eighty-two per cent. of rejections of army recruits in the metropolitan district. Vitamins A and D will ultimately triumph over rickets, though we may have long to wait for the final victory.

If an efficient milk substitute can be produced from the soya bean, and sold at a low price, there

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is hope in the near future for the extirpation of rickets. If we could convince the working class that fish roe is a preventive of disease in children, and that raw green edible leaves help to build up healthy bodies, we should see in a few years a marked improvement in physique and stamina. White bread and margarine, or bread and a smear of jam or treacle, is vitamin-lacking food.

Besides rickets an eye disease, known as xerophthalmia, has been traced to a lack of vitamin A. This malady affects the cornea, and often leads to loss of sight. It can be cured by taking cod liver oil, one of the richest of vitamin A fats. Xerophthalmia is a serious epidemic in several parts of the world.

A fatal disease, pellagra, has destroyed thousands of lives in several parts of Europe and America. It is a disease derived from a low animal protein diet, and it has been cured by a change of diet alone.

Beri-beri is another plague that has been stayed by the use of vitamin food. It attacked our force in the Dardanelles during the Great War. Beri-beri arises from a deficiency of vitamin B.

Scurvy used to afflict a host of our seamen and soldiers. This affliction has been made almost rare by dietetic reform. Orange juice is a panacea for this disorder. Fresh fruit and vegetables are antiscorbutic foods containing vitamin C. One tomato per day will keep scurvy away. A couple of apples daily contain the requisite amount of the vitamin.

Rheumatism may be greatly alleviated, or pre-

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vented, and in some cases cured, by a vitamin-yielding diet. Vitamin C is indicated in many instances as a remedy for all the joint and muscle pains vaguely described as rheumatic, neuritic, or rheumatoid. Polyneuritis is traced to an insufficient supply of whole grain foods, meat protein, yeast, and milk.

Catarrhs, colds, and coughs may arise from a lack of animal fats in the diet. Vitamin A is required by all ageing people subject to colds in the head and chest complaints. Primitive and barbarous people escape most of the diseases of civilization. Why? Simply because they have no mills for destroying the vital parts of their grain, and eat a considerable quantity of uncooked foods, fruits, nuts, and vegetables. Cancer is entirely unknown in many parts of the globe where the diet of the people is natural.

Sterility is fairly common among civilized people, and it is now believed by some investigators that a deficiency of vitamins D and E is a common cause. Whole grain foods especially favour fertility in human beings, and lettuce and pulse are noted as factors.

There seems also to be little doubt that the healthy functioning of the endocrine, or ductless glands, depends upon the presence of essential vitamins in the system.

What should old men and women eat in order that they may be supplied adequately with the three principal vitamins, A, B, and C? They must eat

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butter, eggs, milk, herring, mackerel, salmon, suet, cabbage, lettuce, spinach, water-cress, tomatoes, and carrots.

They need also orange juice, lemon juice, apples, potatoes, wholemeal wheat, lentils, whole barley, and especially yeast preparations. Salad should be eaten every day throughout the year. The elderly will derive much benefit from the use of uncooked green vegetables once a day. Water-cress, garden cress, mustard, lettuce, endive, chicory, parsley may form the ingredients of a salad. In winter, when lettuces are scarce, blanched endive, tomatoes, dandelion leaves, onion, celery, radishes, and grated carrot will make an agreeable salad.

I cannot emphasize too strongly the value of green leaves as an aid to attaining a green old age. If you eat salad and fruit daily, and drink four to five pints of water, you will not require pills or powders for constipation. Raw carrots, yellow turnips, parsnips, and beetroots may be eaten with much benefit to health in old age. The roots should be well cleaned and grated finely. Oil and vinegar, lemon juice, or Florence cream may be added.

Cabbage can be eaten uncooked if it is well minced. Cooking in the ordinary way destroys the best of the salts and vitamins in all vegetables. The best method of cooking is steaming, but even then some of the virtue of vegetables is lost. It is supposed that uncooked vegetables are indigestible. So they are, if eaten in excess. But almost every aged person can digest fresh, raw vegetables, if prepared

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by mincing or grating. All vegetables should be well chewed and eaten slowly.

Dried peas, soaked in water until they show signs of sprouting, are a source of vitamin B, and may be boiled and eaten by those engaged in physical labour or sport. They are, however, somewhat slowly digested, and they do not "agree" with everyone. Pulse of all kinds causes flatulence in many persons. Nevertheless, all the dried pulse foods are rich in protein, and as sustaining as meat. Lentils will be found more easy to digest than peas or beans, and they contain a little iron. This necessary adjunct to diet is found also in water-cress and spinach.

There is an astonishing neglect of green vegetables, cooked or uncooked, in most British families. In winter many people eat Brussels sprouts and cabbage, but in early spring sprouts are not in season and cabbage is often scarce. Perpetual spinach is a pleasant vegetable when steamed and well chopped and mashed, and served with a little butter or olive oil. Lettuces can be steamed. Turnip tops are excellent in spring, and so are the tips of the common stinging nettle, which resemble spinach in flavour, and are a blood-purifying vegetable. In Scotland nettles for the table used to be forced under hand-glasses in the gardens of the wealthy.

A tea made from maté, a species of holly indigenous to South America, has been recommended for rheumatism, and I know one case at least in which a man of over seventy found that this beverage

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very considerably lessened his rheumatic pains. Maté is a favourite drink in Brazil and Paraguay. The dried leaves can be obtained from some of the large grocery stores in England.

Carbonate of soda must not be used in cooking green vegetables. Potatoes should be steamed in their jackets, or boiled very slowly, and not over-cooked. The best part of a potato is just under the skin, and this is usually thrown away with the peel. From potatoes cooked in a rational way we can reckon upon getting a certain amount of vitamin C, the anti-scorbutic vitamin.

The value of yeast, on account of the vitamin B contained in it, is being recognized. The old should eat yeast daily. There is not enough in baker's bread. I recommend yeascuits, a yeast biscuit lately introduced, as a sound vitamin food and suitable for the aged. Marmite is prepared yeast in a convenient form. It is sold in bottles, and is a brown paste resembling a meat extract in colour and consistency. Marmite can be made into broth or soup, or spread on bread, like potted meat pastes.

Experimental food chemists are at present conducting elaborate trial processes for the preservation of vitamins in bottled and canned fruits and vegetables. Now, although tinned, dried, and otherwise preserved meats contain protein, they lack vitamins in certain degree. For example, vitamin B is destroyed in canned meats, and so is vitamin C, though vitamin A is not affected. In bottled fruits and vegetables A is destroyed, B is diminished, and C is lost.

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The new process of fruit canning in America is designed to preserve the anti-scorbutic vitamin. Experiments show that a guinea-pig with scurvy was cured in seven days with small quantities of strawberry juice. According to a report in *Industrial and Engineering Chemistry*, February, 1928: "The canning of strawberries as well as tomatoes results in no loss of vitamin C, or that the loss is so small that the biological method of analysis does not reveal it." It is stated that under the new canning method strawberries preserved for one year have "a similar vitamin C content to raw strawberries."

ANIMALS and savages know the therapeutic value of air and sunlight. In Great Britain and Ireland there appear to be a solar-phobia and a photophobia among a large number of people, although our sunshine average is comparatively low. People devise a variety of means for diminishing the already rather scanty sun-rays in their dwellings. Many architects and builders are sparing of window space, and house owners endeavour to exclude light from rooms by hangings, blinds, and curtains. At the first gleam of sunlight many women screen their heads with a sunshade, and a host of persons fear sunburn.

Coal smoke in the United Kingdom is an effective screen against the healing violet rays. We eat or inhale a considerable quantity of soot. Tons of it descend daily on "England's green and pleasant land." What does it matter? We can't have commerce and industrialism without soot, and are these not the acknowledged signs of an advanced civilization and the greatness of a people?

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One of the worst perils in a modern city is a dim, artificially-lighted office or warehouse from which the light of heaven is almost excluded. Millions of people of both sexes in this country work day by day in such surroundings, while they breathe foul, damp air, stooping over desks, and compressing their vital organs. In entering one of these work-places where young folk are employed, I recall Blake's lines about the growing boy and the chains of the prison-house.

In the hygienic and the intellectual sense alike, we do not show a very passionate yearning for the light. It is not enough that we live in a land of fog and cloudy skies. We allow millions of chimneys to belch forth sulphurous filth, till a heavy canopy veils the sun. The atmosphere of our great towns is appalling. We live in a humid climate, noted for raw fog and ground mists, and we breathe in soot, dust, petrol exhaust, carbonic acid gas, carbon monoxide, and the germs of infectious diseases.

The middle-aged will not attain a vigorous senescence if they live stuffy lives and dread the light. I grant that some can grow inured to certain of the perils of fustiness, and that a very little oxygen seems to suffice for persons long accustomed to the habits of burrowing animals. Degenerate creatures born in gloom, like the insects in the Mammoth Cave, contrive to survive. But what a life! Multitudes of people living constantly in cities are like the etiolated plants that grow in

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mouldy cellars. They are pale, pasty, dingy-skinned, and look unwholesome and unattractive.

However old you may be, get out into the sunlight and open air whenever you can. If you have no time for enjoying sunshine, you must make it, if you wish to be healthy at seventy. If you are a sedentary business man, still working in old age in an office, you will, if you are wise, spend your half-holidays and Sundays out of doors, in the garden, on the golf-links, or on the downs. You will sleep with the windows wide open in warm weather, and at least four inches in the winter. If you feel a draught from the window, fasten a strip of muslin along the top of the frame.

Offices and workshops should be well ventilated. Dr. Leonard Hill writes: "The indoor atmospheric conditions of many offices, shops, business-houses, and factories closely approximate to the outdoor conditions which pertain to such a climate as Madras and Sierra Leone. The stillness of the air in confined spaces has a most potent influence on the cooling functions of the skin, on the cutaneous nerves, and so, on the vigour, health, and efficiency." "More light!" should be the hygienic watchword of those who feel themselves becoming aged.

I shall now discuss the advantages of living in the country in old age. The mortality rate is not reduced in cities through good sanitation, drainage, and pure water, an important fact that is not generally recognized. There is a very high percentage of respiratory ailments in the crowded homes

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of the masses in industrial centres. In Glasgow fifty per cent. of the children show signs of rickets, and according to Dr. Leonard Hill's investigation, very few cases are found in garden cities.

In the country the winds blow freely, and there is no stratum of sooty vapour in the air to exclude the violet sun-rays. Dr. J. Brownlee states that there is sixteen years difference between expectation of life at birth in a large town and the healthiest rural districts. In the North of England towns, there are twenty-one per cent. of deaths before the fifth year of life. The death-rate in big towns is two to three times greater than in the country.

Town dwellers have to resist the constant ill effects of contaminated air, the germs of contagious diseases, and the terrible wear and tear of the nerves caused by noise. The town child reaches puberty sooner than the country child, and is more exposed to vicious temptations. In old age, the body and the mind need healing periods of repose, but the distractions and the hustle and din of cities are incompatible with tranquillity.

Every sense and faculty of the ageing man and woman is over-taxed in city life. Crossing the streets is a nervous strain in these days of congested traffic and fast-moving vehicles. Those delicate organs, the ears, are constantly battered by the din, and deafness is often induced. The eyes that look upon green spaces of the country are rested and soothed after labour. In towns the eyes are incessantly over-taxed.

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The big towns are deficient in the two essentials of healthy life: *Moving air and sunshine*. All mortality records show that country people are far healthier than townfolk, in spite of improved sanitation in cities. It is claimed that Londoners are remarkably healthy people. Who are Londoners? The metropolis is a cosmopolitan centre, and it has been said repeatedly that, without the infusion of country blood, the London family never reaches the third generation.

Hefty Highlanders go into the Scotch towns, and join the police force. They are picked men, robust and well born; but many of them develop tuberculosis when exposed to the germs that swarm in the foul and damp air. Even country dwellers, with all the advantages of pure open air, fresh food, and an active life, contract consumption when they pass their nights and Sundays in unventilated rooms. Fishermen in the North, living under unhygienic conditions indoors, cannot escape the plague, although their occupation is one of the healthiest imaginable.

In moving air of the countryside, and in unscreened sunlight, every function of the human body is healthily stimulated to action. Sun-bathing is an old practice in many parts of the world, and it was the regular custom of the Romans as a means of health, and for the cure of ailments. Those persons who can afford it should build glass-houses on their roofs, where they can practise sun-bathing all the year round.

It is a healthy custom to expose the skin of the

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whole body daily to sunlight and air. I do not advise old folk to sit naked in the full rays of the sun in July and August. Many would, however, find the tonic effect of daily exposure of the skin to light. The healing and toning virtue of sunlight is proved by the health of children who attend outdoor classes in summer, and those who go to Switzerland for a sun-cure holiday.

Let the light into your rooms and offices. Go into the open air every day and in all weathers, except during a damp fog in any of the cities. Keep your windows open as wide as possible in fine weather, and never sleep in a badly ventilated room at any season.

CARE of the skin is often neglected by both sexes in old age, and also by a host of people of any age. We are said to be fanatics of ablution, but bathing the whole body regularly is a comparatively modern habit in England. "The Church killed the bath," writes Havelock Ellis, referring to the ascetic dread of bathing in medieval times. The pious Paula told her nuns that "the purity of the body and its garments means the impurity of the soul." When the ban of asceticism was somewhat relaxed monks were permitted to take two baths in a year. Many devout persons were proud of the fact that they had never even washed their hands.

Christianity was a revolt against Paganism, and the Pagans were enthusiastic bathers. Ellis says we should be just to the Church of Rome. "The purity, brilliance, and healthfulness of the skin constituted a direct appeal, feeble or strong as the case might be, to those passions against which they (the Church) were warring."

I imagine that the modern orthodox hold that

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"cleanliness is next to godliness," but I have no data. At all events, the bathroom is now to be found in a vast number of houses, whether tenanted by lords or skilled labourers. People undoubtedly wash themselves all over the body more frequently than they did when I was a schoolboy. But there are thousands of the great unwashed and ill-washed in all quarters of the British Isles.

The skin of the human body is an excretory organ, exuding sweat, and regulating to a large extent the temperature. Old people who spend much time indoors think that they need fewer baths than navvies who sweat freely at their work. This is a mistake. Sweating is a cleansing process, and out-door labourers usually have clean and healthy skins.

Many people cease to bathe regularly after the period of compulsory ablution in childhood. Some persist in taking hot baths three or four times a week, and in cold tubbing daily till advanced age. There is a happy mean between sheer indifference to a dirty skin and fanatical washing. There is a decided peril in the cold plunge bath for some people after middle age. If the reaction is depressing, if the feet feel cold, the lips show blue, and the finger-tips are numb, the cold tub has done harm. Some phenomenally vigorous senescents, even septuagenarians, can swim in the sea during the coldest winter, without apparent injury. But few people after sixty are sufficiently robust to adopt this Spartan habit with impunity.

Old persons who have been used all their lives

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to washing the body in cold water daily will not be injured by continuing the practice, if a glow and a sense of well-being follow the morning ablution. I know persons well on in years who dash cold water on the chest every day, and they affirm that the habit prevents them from taking chills. This is, however, a less risky matter than a plunge into ice-cold water immediately after leaving a warm bed.

In my sixties I swim sometimes in hot weather, in fresh or salt water, and feel toned up, if the immersion has not been too prolonged. Failing an open air cold bathe, I take a quick plunge occasionally in very warm weather in the bath-room.

I suggest that a warm washing bath three or four times a week is enough for the old, but there is no hygienic objection to the daily warm bath, if it stimulates the skin, soothes the nerves, and induces sleep. But it should be a warm, not a hot bath, unless the latter is advised by a doctor in certain cases.

The bath that leaves the skin red as a lobster, and produces sweating, is not good for the ageing. One can bathe and wash and rasp the skin too much. I am not opposed to a reasonable, moderate amount of skin friction, but I agree with Sir Almroth Wright that the skin can be made unhealthy by too drastic treatment in ablution and friction. The skin secretes an oil, which has its use, and probably a free use of soap affects the normal secretion. I know a medical

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man who only uses soap on those parts of the body where hair grows.

In modern health culture manuals, you will find directions for the preservation of a healthy skin. Vigorous skin rubbing is recommended with all sorts of implements from horsehair gloves and loofahs to rough towels and hand friction. I do not wish to dogmatize, but it seems to me that the cutaneous surface is not improved by methods that suggest sand-papering. When joints ache with rheumatism and the muscles are stiff with exercise, vigorous massage is often a relief. Friction with a rough towel is good, but I cannot believe that the use of scraping instruments benefits the skin, especially after a long soaking in hot water.

Rubbing with the palm of the hand, with a little olive oil or camphorated oil, cannot injure the skin surface, but adds to its elasticity. Oil rubbing may be recommended in old age as a frequent practice after a warm bath. Massaging oneself when troubled with aching joints is, as I have often proved, an aid to sleep. Pinching in the region of the pain, not with the nails, but the finger-tips, will often lessen the ache in a joint.

I have had little personal experience of hydro-pathy in institutions. Many old people find benefit from an annual stay at one of the hydropathic establishments, chiefly, no doubt, through the change of air and scene, the plain living, and the rest. I have tried the wet pack for a sore throat, and found

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it a relief. Sitz and vapour baths are often useful in cases of piles. I am told that "flapping," as performed in some hydros, has a remarkable tonic effect.

In "flapping" the patient is encased in a cold wet sheet, and the operator slaps the whole body surface until it is warmed and reddened. Short, cold sitz baths have been used with some success in cases of premature sexual impotence. Very hot baths, as I have said, are relaxing and sometimes dangerous in senescence. There are several deaths every year through taking a hot bath after a heavy meal. No animal but man likes hot water internally or externally.

In the seventh decade of life the muscles tend to flabbiness, if they are not already soft, and hot bathing will make them flabbier. The daily tepid bath, and a warm bath two to four times a week, is a safe rule for old people of both sexes. The morning tepid bath should be followed by brisk friction with a fairly rough towel, and hand rubbing of those joints and muscles liable to stiffness.

A NORMAL amative life is an important factor of health and the prolongation of existence. The chances of life are unquestionably greater for the married than the unmarried. Records made in Scotland, some years ago, showed that the death-rate for the married and the celibate were: From sixty to sixty-five years of age, deaths of the married 3,385, and of the single 4,330. From sixty-five to seventy, married 8,055; celibate 10,143. From eighty to eighty-five, married, 17,400; single 19,688.

Bertillon showed that women, in spite of the risks of childbirth, live longer when married than as spinsters. It has been stated that a man adds five years to his life by marrying, and a woman four years. "The bodily appearance of married men and women," writes Dr. Havelburg, "always improves in consequence of their regular mode of life; the commencement of senile decay is materially postponed."¹

In "The Great Unmarried," I wrote: "The

¹ "Marriage and Disease."

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physiological and psychic life of the married is obviously more normal and harmonious than that of the unmarried. There is greater resistance to disease, higher vitality, and more mental stability among the conjugal than among the celibate. The tedium of life, the melancholias, and the manias that often impel to suicide, are less frequent among the married than the unmarried." It has been stated that in the civilized nations there are three or four spinsters to one married woman in the mental hospitals.

There should be no need to adduce evidence to show that marriage is a healthier state than celibacy. No animals in a natural condition of living are celibate. No primitive people tolerate celibacy and its deprivations. Only the civilized *homo sapiens* endeavours to live in defiance of the first law of Nature: Reproduce.

The three sources of human happiness are: Means of Subsistence, a Satisfying Sex Love, and Health. These can be placed in order according to individual view or experience. Some would say that money is the first desideratum, and others would say health. Many years of investigation and reflection have convinced me that the predominant cause of unhappiness among the great mass of people in the Western civilized nations is *an unsatisfactory sexual life*.

The enormous majority of the people of this country do not know the pangs of hunger. Only the minority, the very poor, ever experience a

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ravenous biological hunger. Most of us allot a certain sum weekly for the family fare, and food is almost automatically placed on the table. Only those unfortunates who live from hand-to-mouth day by day are seriously apprehensive of hunger. For the starving man food is the chief subject of his daily thought.

Self-preservation among the upper classes of society does not mean a mere struggle for food, but a craving for comforts, refinements, luxuries, and the means of gratifying the lust for power, or for ostentation.

The hardest worked professional or business man and woman has a surplus vigour; a libido or longing, which impels them to love experiences. This natural, fiercely imperious human want often becomes intensified enormously in individual cases by culture, imagination, art, and a number of material and psychic stimuli. Education and refinement complicate the love need, both physically and spiritually; and the conduct of the sexual life is rendered more difficult as a civilization reaches its later stages.

In none of the books known to me upon personal hygiene, the art of prolonging life, and how to secure health and happiness in old age, is there more than a passing reference at most to sexual matters. There are two probable reasons for this omission. Even a large number of the so-called "educated" regard sex as a taboo topic; and it would seem that the writers of books upon health assume that their readers are not interested in the question. This is

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a profound error. It has been said wisely that the natural man is intensely interested in sex, but that the civilized man endeavours to prove by his reserve that he is *not* interested. Women reared in the conventional cultural tradition, that sex is a shameful and unpleasant subject, are amazingly ignorant concerning the main facts of life. And almost everyone, as Lord Dawson has said, needs to be enlightened upon "the scientific bearings of sex."

The personal sex problem confronts both sexes from childhood to the final stage of life's pilgrimage. Passion is often far more fervent in middle age than in youth. Love grows by what it feeds upon. The natural scheme may seem irrational. But there is frequently a flaring-up of erotic emotion in both sexes in the fifth or even the sixth decade. Repression of the sex instinct is usually hard to achieve in early manhood. It is no easier with certain normal types after the age of fifty, and the effects of repression are often more palpable and significant at that age.

The change of life in women, occurring in the years between forty-six and fifty, does not diminish, but often increases, the yearning for the love of the opposite sex. The cessation of the menstrual function and the capacity for child-bearing do not, in a very large number of women, annihilate the desire for marital intercourse. If the capacity for exercising any function of the organs of the human body survives till old age, it is obvious that nature intends that it should be used. It is a sign of

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health and vital power when sexual potency survives after the age of seventy.

Professor Stanley Hall, in his informative volume on "Senescence," says that it would be instructive and useful if the old would tell us more about their love-life. We may be certain that there is as much variety of sexual idiosyncrasy in late middle age as in any other period of life. Some old men have begotten children during the seventies, and a few when over eighty. There are many reasons why aged men should refrain from procreation. Senescent spermatozoa are not vigorous, and the offspring of the old are often puny, and fated to a life of invalidism.

But potency for intercourse and potency for reproduction are not the same. The discoveries of scientific endocrinology have shed a new light on the problems of sex; and it is now known that the secretion of the ductless glands of the testicles in man, and of the ovaries in woman, has a highly important function in bodily chemistry. A little physiological knowledge is essential if we wish to form rational views upon individual and social problems of the sex life.

It should be known that the cells of Leydig, or interstitial glands, in the tubules of the testicles, play no part in the fertilization of the female ovum. These glands have an enormously potent influence upon physique, the chemistry of the body, the emotions, and the behaviour. In women the somatic secretion from the ovaries has the same influence. A

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scanty secretion may cause masculinity in a woman, and an indifference to love, while a profuse secretion may produce a Messalina, or a nymphomaniac.

We should understand that the genital organs in both sexes are not simply reproductive organs. They give rise to hormones, meaning "that which arouses," and they aid in body growth, physical appearance, and personality. The transplanting of "monkey gland," a process that is very widely misunderstood, from the testicles of an ape to a man will work wonders by restoring vitality, youthfulness, efficiency, and sex capacity. The same results follow the transplanting of ovarian tissue in the body of an old woman. In the chapter on Rejuvenation, I shall give a fuller account of the results of introducing young, well-functioning, hormone-producing substance into the bodies of the ageing and the infirm.

The retention of virility in old age is not a mere matter of ability to perform the sex act. It has a much wider significance. Potent interstitial glands preserve the powers of the mind, postpone senility, and aid in resistance to disease. Sexual vigour is associated with creative and constructive energy in other duties than the procreative. In every occupation the most virile are the most energetic, and often the most successful. There are exceptions. Some feebly-sexed, valetudinarian types compensate for their disabilities by sheer force of will. But most truthful biographies of great men and women, were they written, would demonstrate that the

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individual's conduct in love matters is an index to his whole character, and that forceful persons are in the larger number of instances highly energetic sexually.

Virility is an endowment. It is determined chiefly by heredity; but it can be preserved by nurture, or decreased and destroyed by misuse. Biologically, human beings in civilized states are at a disadvantage when compared with animals of a lower evolution. The question of mating is not a very intricate problem for a starling or a rabbit. The hormones operate in due season; there is a craving for copulation, and the mate is soon sought and found. In mankind, in the races of culture, the prompting of the hormones in adolescence is in itself considered by many people a sinful desire. Hence the growing boy and girl find themselves in a world abounding with stimuli to love-experience, and in a society that until quite recently has paid no heed to the tremendous conflicts and problems that arise.

As our teachers of ethics, our sociologists, and parents have failed to help the young in the hardest of life's conflicts, we have a vast number of middle-aged and old people whose knowledge of the psychology of sex and the hygiene of married life is still infantile. These are the "clumsy sex love" victims of an utterly immoral prudery. Many marriages, according to the testimony of Lord Dawson of Pennsylvania, end in disaster through "clumsy sex love."

I repeat that the commonest source of unhappiness

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in the civilized nations is an unsatisfactory sexual life. Millions of women, the majority of them well fitted for married life and maternity, are debarred from the conjugal relationship. Thousands of men are unable to marry at the right age through economic causes, and most of these lead pseudo-celibate lives, and support the great army of professional and free-lance courtesans. A vast number of married persons fail to find happiness in marriage, through ignorance of the first rules of marital hygiene and the art of love. The conflicts of the sex-life give rise, in a large number of cases, to the numerous nervous and emotional maladies known as border-line mental disease, or psychoneuroses.

The well-mated, happily married man or woman of late middle age has a better chance of preserving his or her vitality than the bachelor or the spinster. Haig and other physicians state that sexual intercourse lowers high blood pressure, and lessens the tendency to irritability and bad temper. The moroseness and irascibility of many persons from fifty to seventy may be often traced to sexual deprivation and repression.

The decline of sex potency in men is usually a slow process extending over a number of years. The variability of both sexes in sexual desire and capacity is very great, and for that reason no scientific physiologist will be inclined to make hard and fast rules upon the frequency or infrequency of married intercourse. Some people are extraordinarily virile in the fifth or even the sixth decade, while others

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are feeble in this respect from youth upwards. No period can be fixed definitely for "the change of life," or climacteric, in the male sex.

Taking the variability of sex potency into consideration, I shall refrain from quoting the many authorities, physiological, medical, and theological, who have prescribed for each age from youth to senescence. Every man and woman must solve the question personally. If marital intercourse preserves the tender emotion, which should exist till the end, if it promotes cheerfulness in both partners, and favours refreshing sleep, it is evident that moderate indulgence is healthful.

If anyone asks, "At what age should intercourse cease?" the only sane answer is: "When the capacity has declined and ceased in the natural manner."

There are often signs of degeneration and decrepitude in persons of forty and younger. Duplay, on the other hand, found sound spermatozoa in the semen of old men during autopsies. Sixty-five is said to be the normal period of life when the sexual power ceases. There are, however, many exceptions. Decline is often premature in men who have exhausted themselves in early excess, and in those who have been born with feeble sexuality.

Undoubtedly, the average man must preserve his vitality carefully after fifty. He must be moderate in this respect, as in all things, during the pre-senescent stage of life. The point to remember is that while nature prompts in the natural manner

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coitus is beneficial, even in the autumn days of life. As I have said, apart from the reproductive function, there is another and important reason for the exercise of the generative system. There is, for instance, an intimate relation between the assimilative capacity and the sexual; and the mental and emotional tone is also benefited by regular intercourse within the bounds of hygiene.

The loss of sexual potency may in some cases coincide with a marked waning of intellectual power. In other instances the brain remains active, or it may be more active than before. The capacity for work requiring close concentration is, however, lessened. The brain soon tires, and there is nerve lassitude.

Having dealt at some length with the physiological aspect of marriage in old age, we may consider the psychic or spiritual values. It is not good for man to live alone, and a lonely old age is often a sad one. The aged should enjoy the society of the younger generation. Many old men and women preserve a keen interest in life through affection for children and grandchildren. Old widows and widowers often pine, and suffer in health after the loss of their partners. In the last stage of life's journey only a few would choose to travel alone.

After the flowering of passion there is an autumn of tender memories, of intimate companionship and mutual consolation. In the last hour of his life, the astronomer Laplace pointed to his volumes, and declared that they were as nothing compared to love,

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"the only real thing." Renan declared that love is supreme in all human experience; and Comte, who found the woman of his ideal, wrote: "There is nothing real in the world but love."

And it is in the years beyond middle age that most of us stand in most need of love. "The old couple," writes Mantegazza, "have some wrinkles on their faces and some threads of silver in their hair, but they see each other as they were twenty years ago; and if desires are indolent, and the clasp of the hands does not set the heart beating; if at night ardent dreams no longer disturb the peace of the passions, an odour of loving friendship surrounds them and binds them closer to each other day by day, and grows hourly more like love and less like friendship.

"They have so many remembrances in common. They have twenty years of life to recount to each other, and relating the sad and joyful events, they alternately recount their recollections as though they had in reality lived together all the while, so that mine becomes thine and then ours. . . . In the marriage of two old people who love each other, love is no intoxicating flower, but a friendship slightly gilded by sexual sympathy, which endures longer than the reproductive function even as it precedes it."

THE disorder that causes most human diseases, shortens the span of life, and depresses the whole system is constipation. It is, strange to say, the malady of the cultured and refined, the highly educated and progressive Western nations. It is a repulsive and disgusting ailment, affecting old and young in all classes in Great Britain and America. It has made fortunes for numerous pill and patent medicine manufacturers, and enriched many doctors. Constipation is the disease of diseases.

The act of defecation, the expulsion of waste material from the body, is rarely understood, and comparatively seldom performed healthily by the vast mass of the population. A host of children are brought up with very little teaching upon the absolute need for keeping the alimentary canal clean and in proper working order. Quite young children become chronically costive, through wrong feeding and irregularity in obeying the demand of nature. There are many thousands of lifelong victims of this ailment. There are constant invalids whose ill-health, and often very serious disorders, are due to

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constipation in early life. The consequences of this malady are incalculable.

If the bowels are clogged with faecal matter, the whole system is poisoned, digestion is deranged, the assimilation of food seriously affected, the brain clouded, the mind depressed, the complexion pale or yellow-tinted, the eyes dull, the breath often fetid. Yet millions of persons of both sexes in the civilized communities endure lifelong constipation, and use no rational, simple means for fighting this disgusting disorder. Millions of pounds are spent annually in the Western nations upon pills and other advertised specifics for constipation, and a vast number of people never obtain an evacuation without the use of aperient drugs.

The first principle of health is a regular emptying of the waste matter from the intestinal tract. There are modern physicians who recommend three evacuations daily. If the expulsion of the poisonous material is deferred for forty-eight hours, the body is self-poisoned, and the ground is prepared for the seeds of disease. Children should be taught the rudiments of bowel anatomy and hygiene in the nursery, and the habit of going to the closet either just before, or just after, breakfast ought to be formed in the first years. One cannot insist too strongly upon the importance of keeping the bowels open.

Medical records show that there are human freaks who appear to be healthy although bowel discharge only occurs once a week. There are abnormal cases

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of persons who replace evacuation from the bowels by vomiting, and contrive to live. An enormous number of Englishwomen are very irregular in attending to the natural demand, and the use of the enema is habitual with some. In many girls' schools the inadequate closet accommodation causes postponement of the act of defecation in many cases, and the tendency to constipation is formed, and often lasts for the whole lifetime. The same conditions are common in boys' schools and in certain institutions.

Through the culpable neglect of physiological instruction, a host of so-called "educated" people are unaware that the bowels play an important part in the digestion of food. The intestines are not merely tubes for the separation of injurious matter from the food. The small intestine has a function known as chylification. There is some ground for belief that food leaving the stomach in an undigested state can be digested in the minor intestine. There are ferments in the small bowel that act upon protein substances, and others that affect the assimilation of carbohydrates. When the small intestine has done its work, the refuse matter passes into the great intestine, where hosts of bacteria assist in fermentation and putrefaction.

All over the membrane of the small bowel are tiny villi, with tubes that convey material to the blood. Fat is absorbed by the lacteals of the villi. The whole functioning of the bowels is highly complicated, and therefore liable to derangement. These coils of tubes are not simple drain pipes to convey

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excrement to the sewer or reservoir in the colon. They are chemical laboratories in which important work is done.

Constipation shortens in many cases the expectation of longevity after the age of fifty. Age increases the tendency to costiveness, and for that reason the old must exercise control over bowel function. This control is largely psychic, an action of the mind. The dread of constipation, for example, aggravates bowel inactivity, and many persons take pills or draughts regularly from fear of becoming constipated. There is often anxiety about the daily motion, and this may become morbid.

Undoubtedly constipation should be feared, like any other serious malady, but there is no reason for a state of phobia at the first indication of the disorder. The visit to the closet should not be made in trepidation, but with assurance, and the act should not be hurried. Many business men and women gobble their breakfasts, hurry over evacuation, and rush to the station. This is a very bad beginning to a day's work. The proper rule is to rise betimes, spend a reasonable time over the meal, attend to nature without straining and haste, and walk at a moderate pace to the railway or omnibus. Straining at stool is the cause of several troubles in old age. A certain amount of activity in the abdominal muscles is essential, but serious evil may follow excessive straining.

The natural position for performing defecation is that of the savage, i.e., squatting. The civilized

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human being sits on a high seat. All closet seats should be low. Builders and plumbers are not hygienists.

Diet is of supreme importance in the avoidance of constipation. Exercise comes next. There must also be regularity as to time. This must be an inviolable rule. I am convinced that bowel control can be attained by anyone, except in a few cases of organic defect, if attention is paid to everyday diet, regularity of evacuation, and suitable exercise.

What are the constipating foods? I would place first white bread and all articles of diet made from white flour, such as puddings, biscuits, etc. We must not forget idiosyncrasy. Some people seem to be born with a tendency to imperfect bowel action, and in their case some kinds of food aggravate the symptoms of constipation.

The foods and fruits that facilitate the daily work of the bowels are whole-grains, such as wheat and oatmeal, fresh fruits of all kinds, stewed fruits, fresh or preserved, green steamed vegetables (cabbage, spinach, turnip tops), and raw vegetables, such as lettuce, water-cress, garden cress, mustard, endive, chicory, radishes, celery, grated raw carrot and turnip, dandelion leaves, nasturtium, and any edible herbs that can be made into salads. These vegetables supply the roughage that stimulates bowel action and assists in digestion. Many people are sufferers from chronic constipation because their diet is too concentrated and insufficiently bulky to

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stimulate the intestines. The importance of roughage must be stressed, because townsfolk in particular do not, as a rule, get enough of it in the daily menu. Many people eat sparingly of green vegetables and roots, and neglect fruit, with the result that constipation becomes a habit, and relief is sought in the Saturday night pills or the Sunday morning saline draught. Vegetables are not indigestible when properly cooked and carefully chewed. Raw green leaves are natural laxatives. Raw tomatoes are highly valuable vitamin providers, and have an action on the bowels. The skins of apples, cherries, and plums are excellent roughage.

Begin the day by drinking about a pint of hot water, not scalding, and with breakfast eat an orange or apple. If these fruits cannot be obtained, take stewed prunes, figs, or raisins. Dried fruits eaten uncooked are often as good as a pill in their action, and far more wholesome. Porridge eaten with treacle is a mild laxative. Stewed rhubarb, with brown Barbadoes sugar, is an old-fashioned and safe preventive of constipation.

At lunch, whether you are at home or at a restaurant, insist upon being supplied with a green vegetable or a salad. Fruit may be eaten with advantage at every meal in the day.

The beverages that tend to check a costive habit are tea, beer, cider, light wine, and diluted whisky. But the best fluid for flushing the alimentary canal is *water*. I have already emphasized the necessity for free water drinking. I have known cases of con-

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stipation of long standing cured by copious water-drinking.

Combat constipation by all sane means, for it is the bane of the higher civilized races. Neglect of bowel hygiene has its dreadful penalties in appendicitis, peritonitis, colitis, and prolapsus. It is also a common factor of pains in the joints and muscles, described as "rheumatic" or "neuritic."

If there is old-standing constipation it may not yield at once to a change of diet, and an aperient may be required occasionally. There are at least a hundred well-known aperients from jalap to syrup of figs. What is the safest? I would answer castor oil. Various saline preparations are useful, and some are pleasant to take, especially in hot weather. But I do not recommend the habitual use of Epsom or Glauber salts. The latter causes an increase of gas in the intestines, and it has in some cases a griping effect.

Aperients should not be necessary. A reasonable diet is a preventive of constipation. The question of exercise is also of immense importance. Sedentary occupation, the lot of a vast number of the population of civilized countries, is a cause of constipation. Office workers suffer from piles, bowel derangement and displacement often caused by obstinate constipation. Leaning over a desk is an unnatural position, and the internal organs are cramped and compressed. In the sedentary there is little or no opportunity for developing the important muscles of the diaphragm. The abdominal wall

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requires exercise, and wastage of the muscles is a factor of constipation.

Prolapse of the bowel is often caused by the flabbiness of the muscles of the abdominal region. Women are very liable to serious injury through weakness of the abdominal wall, and many female diseases are the consequence of chronic constipation. The over-weighted bowels may press on the womb and displace it. Men are very careless in matters of intestinal hygiene, but women are even more neglectful. The effect of constipation upon married happiness, the health of mothers, and safe childbirth is enormous.

A book entitled "Culture of the Abdomen," by F. A. Hornibrook, contains valuable counsel and instruction in exercises designed to prevent constipation. "Sex and Exercise" is another useful book, written by Mrs. Hornibrook ("Eltie Rout"). It should be read by all women.

Victims of constipation often find that the bowels act freely during the annual holiday when an increased amount of physical exercise is enjoyed. The necessity for exercise lasts till the closing days of human life, and the aged should be urged to take the kind of exercise suited to their years and their strength.

If constipation could be banished from the civilized communities there would be no need for so many hospitals. Patent medicine vendors would suffer financially, but the mass of the population would be healthier and happier. Constipation probably plays

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a part in the tendency to cancer, a disease that is increasing in frequency to an appalling extent. Besides the physical disabilities that this scourge imposes, there are forms of nervous affections that are associated with it. Much depression of spirits, gloomy apprehension, lassitude of the brain, irritability, irascibility, and malaise of the mind can be traced to the auto-intoxication produced by neglect of the regular and frequent elimination of putrefying matter from the bowels.

There was common-sense in the remark of Byron that "a dose of Epsom salts is the best tonic." Cheerfulness, hopefulness, a condition of mental and emotional well-being are impossible when the blood-stream is polluted. If you wish to live to a ripe and contented old age, avoid constipation as the most insidious enemy of health and longevity.

IN an advanced stage of life the risk of generating toxins or poisons in the body is increased. Auto-intoxication is usually caused by germs in food, which irritate the stomach and the bowels. Poisoning of the system may arise from neglected sores or abscesses, especially in the gums. The commonest cause of self-poisoning is neglect of bowel hygiene.

All day long the town-dweller absorbs poisons of various kinds through the skin, nose, mouth, and intestines. We all eat "our peck of dirt" before we die. After seeing a city man's lungs grey with soot, Dr. Saleeby tells us that he resolved to burn no more coal for the rest of his life.

If some of us could inspect our own lungs we would be aghast at the ravage caused by coal smoke. An examination of the intestinal content in a case of constipation would be equally appalling.

If we cannot be quite clean, we must endeavour to be as clean as we can. In senescence the need for cleanliness is imperative. The wearing-out skin and internal organs must be continually purified and disinfected. The remaining stamina must be preserved in order to combat auto-intoxication. The savage can eat with zest food that would poison a

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civilized man. If we are in health, we can fight the poisons that we absorb accidentally daily.

I am of the opinion that the person who lives upon dairy produce, vegetables, and fruit is more resistant to auto-intoxication than one who eats large quantities of animal food and elaborately prepared, rich dishes.

Alcohol and tobacco contain poisons of deadly character, and so do the reputedly harmless beverages, tea and coffee. The injury that these toxins cause depends upon the quantity absorbed. A little dose of poison may do good, an excessive dose may cause sickness or death. We eat iodine in salt, and the result is satisfactory, because the quantity is infinitesimal. But no one would recommend a free use of iodine as a means of health.

We cannot avoid poisons. We can merely lessen the intake, and fortify our bodies against their malign influence by keeping the skin, mouth, stomach, liver, kidneys and bowels as clean as possible. And the ageing will do well to remember that the older the body, the greater the need for external and internal cleansing.

In diet we must keep an eye on the substances that are likely to contain ptomaine. High game is not healthy food, and a "leg of mutton hung for a fortnight," the favourite dish of a farmer friend of mine, is unclean eating. Tinned meats and fish should be avoided by the aged. In cases of necessity, canned foods should be inspected and tested carefully with the nose before eating them. Fish must

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be regarded with a certain degree of suspicion, unless you have caught it yourself, or purchased it from an absolutely reliable fishmonger. Crabs, lobsters, oysters, and mussels are good food. But they must have a guarantee of freshness.

A plain, nourishing diet, containing as much uncooked food as possible, will assist in resisting the injury of harmful bacteria. Gluttons pay a heavy price in self-poisoning for their indulgence. Habitual heavy drinkers of alcoholic liquors deliberately poison themselves.

I am, in a sense, a "tobacco addict," but I don't follow the example of the centenarian woman who advised everyone to "smoke a lot if they wish to live long." I know that some persons are very susceptible to the poison of nicotine.

Your defence against auto-intoxication must be rational, and not faddy or cranky. Don't encourage a phobia for certain kinds of foods unless experience has shown plainly that these substances do not "suit" you. The nervous faddist exposes himself to danger, and easily imagines that he is ill. The hypochondriac fixes his attention morbidly upon his stomach or liver, and becomes an invalid.

But you must be as clean as you can. Practise sensible and regular ablution of the skin of the whole body. Keep the bowels open by diet and exercise. It is also very necessary to keep the mouth clean. The maladies that begin with a little abscess at the root of a tooth are numerous and formidable. A host of people have chronic Rigg's disease or

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pyorrhœa of the gums. Everybody's mouth harbours bacteria. The amoeba, which is said to be the source of pyorrhœa, is a very small, but highly dangerous, organism.

Pyorrhœa shortens many lives. The symptoms are often unnoticed until the whole system is poisoned, and medical advice is sought. The fell work of the amoeba extends to the stomach and bowels, and pains of a rheumatic type attack the joints. The abscesses affect the membrane of the teeth sockets, with the result that the teeth decay. Anyone who neglects the teeth may expect pyorrhœa. At the first symptoms a doctor should be consulted. Removal of the decayed teeth often cures this disease. Care of the teeth is neglected by at least sixty per cent. of the population, irrespective of class.

In some parts of the kingdom, where people live principally upon devitalized flour in white bread, and drink large quantities of strong tea, early loss of teeth is the rule. Many a good-looking girl in some districts of Wales is disfigured by black and decaying teeth, and gaps in the gums. Neglect of cleaning the teeth at least once a day is sure to result in premature decay and the many ills that are caused by septic gums.

Old persons with useless and decayed teeth should have them removed and wear a false set. There is no doubt that bad teeth shorten life. It is most important that the aged should masticate their food thoroughly. Loss of teeth through decay also causes the mumbling speech that is associated with senility.

Chapter XI Ailments and Disorders of the Aged

AFTER sixty-five years of wear and tear the human body shows signs of deterioration. The signs may be slightly marked, or they may be very palpable. The face, a part of the body that is very sensitive to emotional influences, records years of work, stress, sorrow, and repressed longings. It is as a book in which one may read strange matters. The brow is furrowed, crows'-feet appear in the corner of the eye sockets, the naso-labial folds are deepened, the flesh below the chin becomes flaccid, the hair may be very scanty, the eyes lustreless.

The bones become lighter, and they lose elasticity, and are easily fractured. Deposits in the joints cause old-age pains. There is a change in the gait. The muscles are losing their spring, and they stiffen more readily after exertion. The skin is wrinkled and shrivelled. In both sexes the organs of reproduction become flaccid. The breasts of women shrink and lose their rotund charm. The heart beats with diminished vigour, the breathing is often heavy and audible. The stage of involution has been reached.

The arterial changes of senescence are indications

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that the human machine is wearing out. For many years these canals have stood the strain of blood circulation, directed by the ceaselessly active heart. The arteries vary in thickness, and they carry the blood to the capillaries whence the stream flows into the veins. Sclerosis, or hardening of the arteries, may be induced prematurely, or postponed, in different cases. If the inner coat becomes soft, it is described as "atheromatous." The outer coat hardens through accumulation of substance derived from lime. The hardening may affect only a part of the arterial system, or it may attack all. When a sclerosed artery becomes brittle, it may break through pressure of the blood current. Blood pressure is one of the penalties of old age. Is it inevitable? Some aged people do not suffer much from this disorder. They are persons who have a good heredity and have lived sensibly.

The causes of increased blood pressure are overwork, anxiety, grief, and long-continued immoderation in sensual pleasures, eating, drinking, and probably sexuality. The temperate are protected to a large extent against the ills arising from arteriosclerosis and blood pressure. The old may escape the more serious consequences of blood pressure by eating moderately, drinking water freely, avoiding excess in the use of beer, whisky and tobacco, cultivating serenity of temper, guarding against explosions of anger, and by marital intercourse in moderation.

An organ that troubles many men in senescence is

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the prostate gland, situated at the base of the penis. In size this gland is about as big as a chestnut, and in old age it enlarges. When this occurs there is a frequent desire to urinate, and sometimes the act is inhibited. Hard drinkers are likely to suffer sooner or later from inflammation of the prostate. Chills, anxiety, excitement, and especially constipation may induce disorder of this gland. Medical aid should be sought at the first sign of prostatic trouble.

Bronchitis afflicts a very large number of old persons in the British Isles. It is a disease of germ origin, and often follows upon nasal catarrh, the infected pus dropping into the bronchial tubes and setting up inflammation. The best protection against bronchitis is to avoid badly ventilated places, undue indulgence in alcoholic drinks, excessive smoking, over-eating, exposure to cold when heated, and neglect of the skin.

Inoculation once or twice a year may prevent bronchitis. In some cases this slight operation is quite effective. I was inoculated for three years, and during that period escaped all colds but a single light one. As there is a family tendency to bronchial complaints, I think my case tends to show that inoculation is a real safeguard. Much depends, however, upon constitution. Inoculation is not invariably successful.

Most old people suffer from one form or another of rheumatism. There are notable exceptions. My "Brother Savage," E. J. Odell, who died a nonagenarian, told me that he "didn't know

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what rheumatics felt like." The whole question of rheumatism is mysterious. Modern physicians suspect a microbe as the cause of the disease, and I have met one or two who are confident that the specific germ exists. On the other hand, many doctors are aware that aches and stiffness described by the layman as "rheumatic" may arise from auto-intoxication. For example, a pain in the knee may disappear when the patient has had all his decayed teeth extracted. I have from time to time, since the age of thirty-five, had pains of a rheumatoid type in the shoulders, and less frequently in the knees. Only once, for a few days, have I had to stay in bed with lumbago. These pains are usually traceable to folly or indiscretion. There is no doubt that beer causes acidity in some persons, and I have noted that rheumatic pains frequently follow an extra consumption of malt liquor or red wine. I believe that tea produces uric acid in some cases.

To prevent rheumatism, I can only counsel regular cleaning and flushing of the alimentary tract by copious water-drinking, the regular use of green vegetables and fruits, and other devices to which I have already referred. I suspect that "rheumatism" often arises from the blood-poisoning caused by the purins, or poisons, in the faecal matter. No doubt damp sheets, damp houses, living on a marsh, and prolonged exposure to cold and wet in certain occupations are contributory factors of rheumatism.

But it is a curious fact that, during the Great War,

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men with a tendency to rheumatism lost their pains in the trenches, though they were exposed constantly to wet and all kinds of rigorous weather. I have noted also that, during a camping holiday, when I have often slept by rivers or lakes, or among mountain mists, I have had none of those warning twinges that have occasionally awakened me when sleeping in a warm bed in a warm room. The explanation is probably that on a holiday spent in robust exercise in the open air, the whole functioning of the digestive and excretory organs is so stimulated and benefited that the uric acid, or other poison, is held at bay. A considerable number of farm labourers are attacked by rheumatism, but gipsies are not much troubled by it.

In my own case I have proved that pains in the muscles or joints may be caused by sitting in a window or railway carriage draught that impinges on a susceptible part of the body; by neglect of a tendency to constipation, and by the absorption of certain acids in food. It should be known that some acids counteract uric acid, while others favour its increase in the system. The malic acid of apples, contained in cider, is a preventive, and to some extent a remedy for rheumatism.

An anti-rheumatic dietary should exclude the lean of butchers' meat, and fat fish, such as salmon, but may include potatoes, carrots, spinach, lettuce, watercress, garden greens, cheese, butter, eggs, milk, apples and most fruits. Lemon and orange juice are opposed to uric acid, and are often recommended.

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I know a drover who is continually out in the wind and rain, and who drinks beer freely, yet has escaped rheumatism. When I asked him if he could tell me why he was immune, he said: "Me and my folk have always had lemons in the house. If you drink lemon juice, you can't get rheumatics." I quote this nostrum "without prejudice."

Rheumatism is closely associated with dyspepsia and constipation, and I am convinced that errors in diet and neglect of exercise are powerful accessory factors of the various ailments described as gouty or rheumatic. The prevention of lumbago, sciatica, and probably rheumatoid arthritis is largely a question of eating. If you are already "a rheumatic subject," you must use measures to eliminate the toxins from your blood. Marmite is a prepared yeast food that has been found very useful in some cases. Maté, the dried leaves of a South American holly, made into tea is stated to be anti-uric in its action, and I know at least one aged man who finds maté tea staves off rheumatism of the joints.

When assailed by rheumatism, take a dose of castor oil, keep warm, eat confidently cheese, marmite, milk, butter, and fresh vegetables, and strike out meat, beer, and tea from the menu. Take a hot bath, and apply hot water bottles to the affected parts, and by additional coverings on the bed, induce sweating. Massage of the aching joints and muscles has good results, and rheumatic sufferers should rub the parts themselves every day, and gently exercise the joints. It is a great relief if salicylate of soda

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can be introduced quickly into the blood-stream. But the problem is how to do it.

Undoubtedly aspirin, in its several advertised forms, brings relief, and the drug is fairly safe when the heart is healthy and the dose is moderate. A scientific chemist, one of my friends, has experimented with a lubricant containing oil of winter-green and a salt. The ordinary oil of winter-green is a well-known remedy for rheumatic stiffness. But a medium is required to facilitate the introduction of a salicylate into the blood, and my friend claims that he has discovered the means. I have used the preparation with remarkable results when threatened by lumbago, and several friends of the inventor have had an even more convincing proof of its efficacy. The only difficulty in putting this remedy on the market is the fact that many persons dislike the odour of oil of winter-green.

Judicious exercise is a preventive of rheumatism. Sir F. Bowden, who was an enthusiastic cyclist, after a breakdown in health, says in "Cycling for Health," that Dr. Ward of Harrogate pointed to a man on a tricycle and said that "three weeks previously" he had a partial paralysis and could not move his legs. "The cycling had done wonders for him."

Sir F. Bowden writes: "Before I became a cyclist I often had very painful attacks of rheumatism, lasting for days, but now I never get any." I wish to endorse this personal testimony concerning the preventive virtues of physical exercise at any

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period in life. I have myself relieved and banished aching stiffness in the knee joints by a forty mile cycle-ride. I have much more to say on the question of exercise in another chapter. Exercise breaks up and distributes the accretions in the joints, which cause rheumatic aches.

THROUGHOUT the ages mankind has sought charms and potions for the prolongation of life and the renewal of youthful vigour. No "elixir of life" has ever been discovered. There are, however, scientific medical means by which old age may be arrested, and energy and powers of resistance restored.

Since the day when Brown-Séquard, a French physician, announced that he had discovered a method for repairing the ravages of age, and making the old young, numerous physiologists have conducted experiments in rejuvenation. Some of the results are very remarkable.

The true "elixir of life" is in the human body. It is a secretion from a ductless gland in the generative system. This fluid contains a hormone, a stimulator, arouser or vitalizer, of very great importance. It is the determinant of sex, the physical, mental and emotional characteristics, and a source of energy for the whole system.

Not one man or woman in ten knows that the reproductive organs have a double function, i.e., Reproduction and the Upkeep of the Body. A

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certain number of men have learned that the testicles produce semen, and a smaller proportion of women know that the ovaries make ova. The discovery of the interstitial cells by Leydig probably marks an important epoch in human history. These cells are apparently dormant in the young child, but at the age of puberty they become very active. They are in many respects the life-force. For it is well known that the castration of males, the removal of the testicles by operation, or ovariectomy in females, the excision of the ovaries, produces very palpable physical and psychic changes of a degenerative character.

Vague recognition of the part played in metabolism, the bodily chemistry, has been instanced in many parts of the world by attempts to renew youth by eating the testicles of animals. To-day spermin is used as an invigorator, and may be bought at the chemist's shop. Steinach's experiments upon rats showed that sex can be changed by the implantation of ovaries in castrated male animals. He discovered also that the grafting of the testicle of a young rat in the body of an aged rat had the effect of rejuvenation. Old rats treated in this way became young again, lusty, combative, and attractive to the females.

Voronoff, after observing the results of castration upon Oriental eunuchs, inferred that the essence of life is in the testicles. When the interstitial glands cease to function, age and degeneration are noted in all male animals. The same signs appear in women when the ovaries are inactive. Voronoff's experi-

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ments proved that the transplantation of a young testicle into an old body produced extraordinary changes in physique, renewed efficiency for work, and the restoration of lost sexual potency. As if by magic, this physician made old and decrepit rams young and lively.

The difficulty in obtaining healthy human testicles for transplantation led Voronoff to experiment with the testicles of the monkeys nearest to man in evolution. It is stated that the operation is almost always successful. Blood pressure is lessened, bladder irritability diminished, vigour recreated, sex capacity recovered, memory improved, and many of the signs of age banished.

Dr. Lichtenstein of Vienna, acting upon Steinach's conclusions regarding rejuvenation in animals, carried out experiments which showed that the restoration of vigour in the old is practicable by other means than testicle planting. The operation of vasectomy is claimed to possess the same value as the introduction of "monkey gland." The cases recorded are numerous, and almost all of them must be regarded as remarkably successful.

Premature old age, diseases, incapacity for work, loss of virility, and mental depression have been successfully combated by the vasectomy and vasoligature operation in several countries of Europe. It has been practised successfully in England by Dr. Norman Haire.

"Does the Voronoff method of rejuvenation transfer the traits of an ape to man?" is a question

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often asked. Voronoff denies that the operation has that result. There has been some rather acrid discussion on this "monkey gland" question, and a number of theologically-minded persons regard the practice as evil. This is not surprising. Every scientific attempt to make life more tolerable has been regarded at first as impious. Even the discovery of oxygen by Priestley was considered sinful, and there was bitter opposition to the use of chloroform after its discovery by Simpson.

It is probable that vasectomy will be the principal method of rejuvenation in the future. The operation has some important social bearings. The time is not far off when habitual criminals, the hopelessly diseased, and the mentally affected will be sterilized, and vasectomy provides a humane means. The operation is simple. A small incision is made in the scrotum, and the seminal tube is ligatured. While sexual virility is in some cases heightened, the capacity for reproduction is annihilated. The interstitial gland is quickly stimulated to increased activity, and the hormone works marvellous transformations in many instances.

Uninformed opponents of eugenic methods for the prevention of breeding among the hopelessly unfit imagine that sterilization involves removal of the testicles, i.e., castration. The vasectomy operation leaves those organs intact, and it does not inhibit sex capacity, but tends to restore it.

Readers interested in the development of rejuvenation methods will find Dr. Norman Haire's volume

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“Rejuvenation” highly instructive. There are numerous recorded cases of the remarkable results of operations in the book. Dr. Haire states that “the operation of vasoligature and vasectomy has no ill effects.” In extreme old age the operation “ameliorates the condition to some extent.” The noted results in a large number of cases show general improvement in health and the mental power, relief of indigestion, improvement in the skin, and new hair growth.

“Transplantation of an ovary has no ill effects,” says Dr. Haire. There is not much evidence at present as to the effect of transplanting operations upon women. X-ray treatment has had some good results upon women who were prematurely aged, restoring energy of body and mind. In one case a woman of forty-eight was described by her husband as looking twenty years younger, after treatment.

CIVILIZED men have overcome partly the natural man's dislike of compulsory labour. This has been a painful process. With the exception of ants and bees, those ultra-fanatics of ceaseless toil, animals are not very industrious. There are times and seasons when animals in a wild state are forced by a scarcity of food to increased activity. But most animals have a full share of leisure for love and play.

Broadly speaking, work is enforced activity, whereas the exertion expended in play is voluntary. "The schoolboy creeping like a snail unwillingly to school" is a symbol of the average man's attitude to work. Undoubtedly, an enormous number of civilized people enjoy work, but these are the creative types, who have the good fortune to be able to gratify the instinct to produce things. Those who earn their livings in distasteful occupations do not enjoy labour. "The desk's dry drudgery" is a daily penance for multitudes in the Western nations.

Some highly successful merchants and factory owners enjoy their work. Their clerks and machine tenders, engaged in more or less distasteful tasks, have no great zest for work. For them it is a case

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of needs must when the devil drives. There are many canting platitudes about the "beauty, dignity, and holiness" of labour. Very few men have dared to proclaim the holiness of leisure, relief from the struggle for mere physical subsistence, because, quite wrongly, leisure is regarded as an opportunity for idleness. But leisure is the source of all the beautiful and noble activities of mankind. The artist, the scientific discoverer, the reformer, the philosopher, and the poet require at least a certain degree of exemption from the tasks of hewing wood and drawing water.

We live in a work-worn age. Men and women attempt to do the work of steam engines, in order that they may enjoy more comforts and luxuries. Meanwhile they have no leisure for *living* in the true sense. I shall be reminded that many very old people have worked hard all their lives. This is quite true. Activity favours longevity. Inactivity is living death. Produce by all means. But produce *what* and *how*? An immense quantity of "productive" labour is simply a waste of time.

Work that is enjoyed keenly does not always absorb the entire energy. Uncongenial toil is a perpetual weariness of the flesh, and one of the causes of premature ageing. No doubt an ardent politician or stockbroker may injure his health by overwork, even though he finds his hyper-activity pleasurable. But the man who is compelled to over-exertion in an occupation that he detests is in a very much worse plight. A sad heart tires in a mile.

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The mechanization of thousands of human beings in the "progressive" nations is a tragic phenomenon. There are hustlers who have transformed themselves into animated machines. The man who is afraid to retire from business because he does not know how to use leisure, and dreads the risk of ennui, has lost more than he has gained. The man who cannot use and enjoy leisure is lost spiritually. Like that pitiful example of insect industry, the ant, he is doomed to a premature exhaustion of vitality.

Overstrain in work kills many ageing people before their time. We say: "It is worry, not work, that kills." This is a part-truth. Work without worry is a strain on the nervous system, through the constant production of the fatigue acid in the blood. Tiredness is healthy, but constant exhaustion is a different matter. Excessive fatigue renders the body non-resistant to disease. Over-exertion combined with worry is fatal. When stocks go down in New York diabetes goes up. And most busy, money-loving princes of industry suffer in old age from chronic constipation and liver complaints. Others have a nervous breakdown, or a paralytic stroke at fifty-five, when they should be at the height of power.

The two extremes, over-activity and laziness, tend to shorten life. Every muscle and bodily organ is designed for use, and disuse means degeneration. Over-use also induces degenerative changes. The athlete's heart is often enlarged, or otherwise injured, though he may have the frame of a Hercules. The

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senescent must slacken his pace, take more rest, and learn the art of relaxation, physical and mental.

I know a retired man of business who spends the evening of his days in a bar, talking nonsense, and dyeing his face a deeper red. That is one way of spending leisure. Each to his taste. But there are surely better ways of passing the time. If an old man has no need to work for a living, he has time for civic duties, study, travel, and gardening.

When an elderly man has made provision for his family, and has sufficient means to satisfy modest desires, he should retire gracefully, and give a chance to younger men. No doubt the veteran chief of a business firm is a good figure-head, and he may be still able to direct and organize. But if he is prudent, he will find men who are capable of developing the business that he has built up, and give them a free hand, within limits. Many business houses have been ruined through the conservatism and obstinacy of senile men who insist upon directing.

A man can continue working too long. Many sons of manufacturers and merchants chafe and fret under the rule of an aged father, who has outgrown the ability to extend a business, and to compete with rivals in trade. I am not saying that the young are always capable, but that youth deserves its chance of "making a spoon or spoiling a horn." Old people must check the tendency to under-rate the capacity of the young to take up the tools and carry on.

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“Young men are fitter to invent than to judge,” wrote Lord Bacon, “fitter for execution than for counsel, and fitter for new projects than for settled business; for the experience of age, in things that fall within the compass of it, directeth them. The errors of young men are the ruin of business, but the errors of aged men amount but to this, that more might have been done, or sooner.”

It is true, as Bacon states, that “men of age object too much, consult too long, adventure too little, repent too soon, and seldom drive business home to the full period, but content themselves with a mediocrity of success.”

Some senescents are able in authority, but it is not invariably true that age brings wisdom and the ability to counsel and lead. The old fools and the senile dodderers and potterers are more numerous than the sage and the discreet. According to psychological experts, the average intelligence of adults is that of adolescents of fifteen years and a half. Years do not always bring growth of the thinking matter of the brain. Often the effect of age is atrophy of that neglected organ.

The handicaps of old age make work more laborious and difficult, whether the work is hoeing turnips or supervising a factory. One serious impediment is failing memory. Gradually, but palpably, as we grow old the capacity for remembering wanes. For things of long ago and far-off, the recollection is often vivid. It is the things of yesterday and of the moment that we forget. We

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forget to answer letters, and having answered, forget to post them. Our wives ask us to remember some little domestic detail, and we forget, and are accused of selfishness.

In senescence all of us are apt to forget the names of people and places. We may be able to visualize the church and the village green, but we cannot recall the name of the village. We see an acquaintance with the mind's eye, but cannot remember his name. We mislay our eye-glasses, pencils, and pocket-knives. We lose umbrellas, canes, and tobacco pipes in trains and omnibuses. Our forgetfulness exasperates us, and our friends also.

A man of sixty, who had promised by telephone to meet me at my club at six in the evening, failed to arrive. I wrote for an explanation, and he said that he had "clean forgotten" that I had spoken to him on the telephone. A few days after, my friend arrived at the house of a hostess two days after the date fixed for dinner. These incidents were a sharp warning that the brain was becoming tired and old. He had spent a very strenuous business life, and he realized suddenly that it was time to retire.

Impairment of the faculty of memory is one of the more manifest signs of an ageing brain. The errors and difficulties that occur are a source of annoyance and worry. But the old should not despair, and imagine that they are helpless victims of amnesia. There are various aids to memory conservation. There are, for instance, the diary and note-book.

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It is harder to maintain mental than physical activity in senescence. William Walker, aged one hundred and six, the oldest man in the county of Nottinghamshire, continued to lay bricks at the age of eighty-five, and there is an Irish farm labourer of ninety. Many field labourers work hard daily in advanced old age. The aged brain-worker is unable to concentrate for many hours. The thoughts become hazy and blurred, and the hours of work must be curtailed. Mental exertion is a severer strain on the nervous system than muscular exertion, and direct thinking is an arduous occupation. It is for this reason that so many people shirk thought, and live in a world of fantasy and dreams. The unconscious mind of man loves pleasure and hates work.

It is a discomfoting reflection to many middle-aged folk that longevity may bring that sad last stage when the mind is "sans sense." There should be no "second childhood." I have met several octogenarians, and two nonagenarians, who showed no symptoms of a regression to infantile behaviour. The childish old man or woman is abnormal. Frequently second childhood is the result of never having attained a normal adult mental vigour. Hereditary feeble-mindedness is very common in the civilized races, and it will probably continue to increase until the sterilization of the hopelessly mental defective is accepted as social morality. Mental deficiency is a subject completely ignored by the mass of the population. It is only studied by a few eugenists and psychologists. Hence the vast number of dangerous, aged, feeble-minded persons of both sexes.

Abnormal children are the offspring of two feeble-minded parents, and such parents are unfortunately extremely prolific. The average number of children of feeble-minded persons is about one-third more than in normal families. The number of illegitimate mentally defective children is appalling. These

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unfortunates constantly recruit the ranks of the criminals, prostitutes, wasters, tramps, loafers, and the actually insane. Mental feebleness is a national menace and an enormous cost to the community.

Although heredity is the chief cause of mental deficiency, there is acquired deficiency, the result of intellectual laziness. Every organ of the body gains power through due exercise. If muscles can be enlarged by activity, so can the brain. Taking the whole of the population, the brain is one of the least used organs of the human body. I refer to the use of the fore-brain, the seat of thought, and not to the kind of thinking that is actually instinctive. Inquiring brains are comparatively rare, even in the so-called cultured races. As Dean Swift observed: "Most men have as much turn for thinking as they have for flying."

Direct, rational, dispassionate thinking is a rigorous activity, and most men and women are idle. All the sensual pleasures have a universal appeal, but intellectual pleasure is an acquired taste, and demands a certain sacrifice of sensual enjoyment. Do not suppose that I undervalue the pleasures of the senses. The gratification of the sex impulse is only inferior to intellectual pleasure by reason of its comparative impermanence. The pleasures of the intellect may be enjoyed continuously from early childhood to an advanced old age. Regarding the joys of love, it should be remembered that from the sex instinct springs the desire to appease scientific curiosity, as Havelock Ellis states very convincingly

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in his chapter on "The Art of Thinking," in "The Dance of Life."

Between the actually feeble-minded and abnormals, and the thinking class in a community, there is an enormous multitude of the uneducated and the ill-educated. Education of the conventional, pedagogic and academic standard is responsible for making a vast mass of the population hostile to knowledge. The average boy and girl, after leaving school, rejoice exceedingly that they have finished for ever with "education." We must realize that a large class in the cultured nations never open a book of any description, and that millions only read the newspapers, or a few inferior novels. I regret to repeat what others have noted, that the intelligence of the bulk of the people of Great Britain is much below that of most European countries. We have, therefore, a number of senescents who come into Hamlet's class of "tedious old fools," and many who exhibit premature signs of senile stupidity and dementia. And unfortunately some of these are in positions of high authority.

A persistent neglect of the brain has enfeeblement in old age as a natural result. An aged man who has never used the muscles of his arms in arduous exercises cannot compete with a blacksmith. Neither can an atrophied brain form judgments that require a well-trained mind. Many old persons suffer from the tedium of life through lifelong intellectual indolence.

The preservation of the senescent brain power

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depends upon the amount of exercise during the previous stages of life. The man or woman of sixty who has lived in a world of dreams and fantasies, and dreaded reality, is a likely subject for early decay of the mental faculty. After fifty only a very few persons are capable of re-education. The sensitive plates of the brain are worn. The conservative become more conservative, and the arrogant more dogmatic.

Personal chronology has nothing to do with an aptitude for wisdom in old age. Some brains are feeble and entirely impervious to new ideas from puberty to the decline of life; whereas some brains retain receptiveness and are active in the last decade. Second childhood is the penalty for mental sloth. Inevitable physiological changes in senescence impair the intellect of the most vigorous; but the enfeebled mind is threatened with severer forms of injury.

An active mind in the autumn and winter of life is an aid to physical as well as mental health. A zest of life in old age depends upon interest, and it is interest that keeps the body young. An absorbing study, scientific inquiry, or hobby is a perpetual stimulus to other vital organs than the brain. Many students, scientific thinkers, and intellectual artists live to a green old age, and are remarkably healthy.

Longevity is to some extent a question of will. It has been remarked that persons who have an annuity, or a pension, frequently live beyond the average span. The will to live is usually strong in those who are financially secure in old age. But the will to live

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may exist in an invalid of seventy, and even in the poorest man in the community. We can hasten the end by wishing for it, or defer it by an intense yearning to live.

The senescent man or woman who wishes to avoid the symptoms of dotage, must keep an alert mind, and refuse to lag behind the age in thought. He or she should know that new thought may, or may not, be valuable. The constant disparagement of the new, to which many old people are prone, is a mark of failing intellectual open-mindedness. Acid criticism of the new generation should also be avoided by the aged. Youth has its nascent wisdom as well as its assurance that the old are unalterably reactionary.

We cannot easily change a lifelong attitude of mind in the seventh decade of life. We can only combat the tendency to think that because we are old, we must be right. Such an assumption is folly. "There is no fool like an old fool." My father used to remind me often that "the young *think* that the old are fools, but the old *know* that the young are fools." However that may be, the follies of youth are not more ridiculous than the follies of age, and they are more excusable.

The foregoing passages are by way of preamble to the thesis that mental involution in senescence is largely preventable. The brain that has been exercised duly for sixty years may be, however, less acute, less retentive, and less capable of continuous exertion. But it need not be dull, slothful, obstinately conservative, and arrogant. There is no reason why

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the mind should stagnate after seventy. No one is ever too old to learn.

Culture of the mind is one of the safeguards against the depressions, morbid fears, and insanity of senility. The old are exposed to risks of mental depression and melancholia, and these psychic troubles are increasing in all the Western nations. The number of neurasthenics is enormous. Nervous disease is almost as common as measles among the civilized. "Neurasthenia" is nerve exhaustion, and the chief symptom is chronic fatigue. There are psychoneurotic derangements of a different type, which are often described as "neurasthenia." In fact, the term covers loosely a very large number of psychic symptoms.

Neurasthenia may follow illness, such as severe influenza, but it is then transitory. There are persons who suffer perennially from this disorder, which some physicians believe to be hereditary. The signs are numerous, ranging from constipation to inability to concentrate the mind, or serious "brain-fag." No neurasthenic microbe has been discovered. According to Dr. Ernest Jones, mental strain and overwork are not sufficient causes of the malady.

Dr. Jones thinks it unlikely that sexual excesses, "provided that the functioning is of the normal kind, ever produces neurasthenia, though it is commonly cited as an important cause." Probably a fear that sexual excess has injured the system may cause a neurasthenic condition. Professor Freud and other psycho-analysts regard excessive masturbation, com-

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bined with anxiety as to the consequences, as the true cause of actual neurasthenia.

It is necessary here to point out that many aged persons of both sexes are apt to attribute some of the pains and derangements of age to an early practice of masturbation, or to a constant habit. That an excessive and prolonged masturbatory habit, accompanied by feelings of shame and guilt, and a dread of serious injury to health, will produce neurasthenic symptoms is well known to modern physicians who have made a study of auto-erotic practices.

“The continual mental conflict, the compensations and over-compensations, cause a chronic feeling of fatigue,” writes Dr. J. F. W. Meagher, in his “Study of Masturbation.” “This state of turmoil uses up energy which had better been utilized in other acceptable and useful ways. . . . Abnormal self-consciousness and morbid introspection are commonly observed. For interest in this form of sexual activity draws the patient away from healthful mental and physical occupations, and is inimical to a normal family and social life.”

Many of the fears of neurasthenics are ill-grounded and exaggerated. The damage inflicted by the habit in question is not, generally speaking, irreparable. Many thousands, probably millions, of men and women endure remorse for this indulgence, and much of the mental misery of civilized people, with high ethical ideals, arises from the severe conflict between moral repression and the uncontrollable erotic longing.

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Fear of insanity, as a penalty for sinful carnal practices, is not uncommon in old persons, especially women. Deeply religious people undergo agonies of dread, and neurasthenic and other neurotic disorders may ensue. There are, however, very few modern physicians of the mind who ascribe masturbation as a specific cause of insanity. It is very probable that the fear and moral reproach arising from masturbation may in some cases develop into the mental disease known as dementia præcox.

Dr. Stekel, an eminent Austrian doctor, states that neurasthenia so-called is always of mental origin. We may accept the more recent opinion of well-known psychotherapists and psychiatrists that other causes than overwork must be sought in cases of neurasthenia.

Whereas the licit sexual intercourse of married senescents, who remain ardently attached, is beneficial and promotes cheerfulness, the masturbatory gratification is notoriously depressing in its after-effects in many cases, and may lead to nervous illness.

Hypochondria is the malady of the imaginary invalid. Tens of thousands of men and women of middle age imagine that they are suffering from fictitious ailments. In old age the imagination may become highly exaggerated. A hypochondriac fixes his attention upon a slight pain or unusual sensation in the stomach or intestines, and infers that something is wrong with his digestive apparatus. In one sense he is right, for indigestion may exist. This is not necessarily an organic malady, but an irregularity

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of function, which can be corrected by right treatment.

The imaginary invalid is morbidly afraid of gravel in the bladder, stone in the kidneys, cancer of the bowels, and other terrible diseases. He develops fads about foods and drinks, becomes "a strict vegetarian," or "a fruitarian," or gives up eating salt, sugar, and what not. Every hypochondriac has symptoms that the healthy man disregards as trivial, and his imagination is so vivid that illness becomes a reality.

An immense number of invalids are of the hypochondriac type, and quite as many are hysterical. I know a man whose close friend died from cancer of the bowels. Ever since the death of his friend, this man has lived in continual apprehension of cancer, and to prevent this tragedy he spends much time and money in intestinal lavage, drug-taking, dieting, etc.

Asthma, which is one of the diseases to which old people are susceptible, is often of mental origin. Obscure and baffling symptoms are frequently hysterical, such as mental torticollis, or wryneck, minor forms of paralysis, spasmodic twitchings of muscles (tic), chronic cough, and chest disorders. Hysterical aged men and women are a source of anxiety to their families. They appear to be shamming illness, but they are really ill. The hysteric often has an outbreak when his or her will is thwarted, and many domestic tyrants are the victims of this neurosis.

"The will to disease" is a curious perversion, but

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it is not uncommon in ageing persons. There are certain advantages in being a valetudinarian. One becomes an object of sympathy and solicitude. Everything is done by sympathetic relatives to lighten the burden of infirmity, and the exactingness of many senescents of the hysterical or hypochondriacal class is intolerable. Many daughters are debarred from marriage, and imprisoned in the home by selfish old parents, whose maladies are to a large extent imaginary.

The state of extreme apprehensiveness and morbid dread, so frequently misdescribed as "neurasthenia," has been called by Professor Freud "anxiety-neurosis." There are definite physical symptoms of this psychoneurosis. The chief are minor heart disorders, digestive trouble, diarrhoea alternating with constipation, asthmatic cough, giddiness, and neuralgia. The sufferers complain of acute depression, disturbing dreams, unrestful sleep, and "a fear that something dreadful will happen." This state is often noted in both sexes at middle age. It is a more painful illness in many cases than actual physical disease, because ordinary medical treatment fails in most instances to bring relief. The cause of this very prevalent nervous affection is emotional, or psychogenic. It arises from continual sexual tension, which has no natural relief. After the age of fifty, as Dr. Ernest Jones remarks, there is "a disproportion between desire and opportunity, or between desire and potency."

I have met with many examples of anxiety-neurosis

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among friends and acquaintances of middle age. The passion and erotic yearning is not restricted to youth and the heyday of life, as I have stated in the chapter upon "Marriage and the Aged." No instinct among the cultured races is so widely repressed as the sexual. It may be necessary to explain here that "sexuality," used in the scientific sense, is inseparable from most human activities, and does not refer merely to copulation. Sex includes biology, physiology, psychology, genetics, eugenics, hygiene, social and ethical questions, limitation of population, and other vital human topics. Sex is the central problem of life. Wherever we turn, we find its predominating sway upon the destinies of nations, societies, and individuals.

The mental conflicts arising from personal sex problems continue for the whole of life. The waning of passion in senescence does not invariably end the conflict, and in middle age it is often deepened through various physical and psychic causes. "Old maids' insanity," hysteria in both sexes, morbid fears and compulsions, the melancholy of old age, alcoholic intemperance, drug addiction, and some forms of actual madness have a psychosexual root cause.

Anxiety-neurosis does not assail the man or woman who is fortunately mated and has natural gratification of the emotional and physically erotic desires. It is the disease of the sexually thwarted and deprived, a very large class in our community, predominantly among the female sex. Among the factors of this disorder probably coitus interruptus and pathological

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masturbation are the commonest. Interrupted sexual intercourse, practised for family limitation in many cases, is responsible for some examples of anxiety-neurosis. When the practice is abandoned, the symptoms disappear.

The climacteric, or change of life, in women may bring mental as well as physical derangement. These psychic trials are generally attributable to inner conflicts of the emotions, chiefly relating to the amative life. The mental stress and bewilderment that arises in puberty in young girls, the first appearance of the menstrual function, falling in love, the early experiences of married life, pregnancy, child-bearing, and the climacteric all tend to induce disturbance of the mental balance in the average, or so-called "normal," person. When there is a predisposition to "nervousness" and hypersensitivity, both men and women suffer at recurrent crises in their lives from the erotic conflict. In some cases the consequence is neurotic illness, and in others insanity.

The aftermath of many years of repressed emotion is to be noted in a number of crabbed, eccentric, malcontent old men and women. The dammed-up emotion may find expression in a disguised form, such as fanatical religiosity, gourmandizing, drinking to excess, and interposing in the love affairs of young people. Some old maids find malignant pleasure in bringing about disaster in the love-making of nephews and nieces. Sexually disappointed fathers are often quite unsympathetic towards the love affairs of their children. And the tyranny of

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"the fond mother," as Anatole France remarks, is often the most intolerable infliction in a man's life.

There would be more domestic peace and happiness if old people would recall the throes, the temptations, the resistances, the anxious perplexing problems, the sense of helpless ignorance, the frustrations, and repressions of childhood and youth. But in senescence many of these conflicts are forgotten, or only vaguely remembered. This is one reason why the older generation are frequently incapable of understanding youth, and offering useful counsel.

The association and close friendship of old and young is highly beneficial to both. Unfortunately, many children distrust the counsels of their parents, and entrust their deepest secrets to intimate companions. It has been often remarked by students of juvenile psychology that boys and girls will talk far more frankly upon the conflicts that beset them to comparative strangers than to their parents. If any elderly readers of these pages desire confirmation of this view, I advise them to read "A Young Girl's Diary." This volume should be an illumination for an immense number of grandfathers and grandmothers.

To preserve a sane mind in old age, an old man, or woman, needs at least occasional companionship with young people. But children keep themselves aloof, intellectually and emotionally, from the minatory, dogmatic, sententious aged folk. A child does not enjoy the self-appointed inquisitor of the family, uncle or aunt, who incessantly asks questions to test his

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progress in the school. Young people prefer old playmates to old lecturers.

It has been stated by some authorities on the causation of insanity that the selfish are more likely to lose their reason than the unselfish. Undoubtedly the intense self-absorption and latent megalomania of the egoist may contribute largely to the causes of mental disease. Stingy, miserly, suspicious aged people are not unlikely subjects for mania, delusions, and senile dementia. The well-to-do old people who have "made good," and have no need to worry about the limited future, should find happiness in helping the young.

The aged man with a store of knowledge as his only wealth may have many friends among the young, if he will refrain from oracular dogmatism, and be ready not only to teach the youthful, but to learn from them. Herbert Spencer's pathetic message to a married friend: "Will you lend me some children for a few days?" instances the need that the healthy-minded old experience for the company of the young.

Many abnormally introspective old men and women, who are musing continually upon the trials of age, and living only for themselves, would be healthier and happier if they surrounded themselves with youngsters of the hearty, boisterous type. There is a tonic for the old in the glee of a children's party. I commend blind-man's-buff and musical chairs as excellent pastimes for the young-old.

There is a way of escape from repressions through sublimation, or the diversion of the current of primal

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desires into another stream. The philanthropist is often a man who has known acute repression of his strongest yearnings. For the love of woman he has substituted the love of humanity. Men with a primitive desire to inflict pain on others have sublimated their crude instinct, and become useful surgeons who impose pain that they may heal and relieve suffering. Men and women with the love of display, that has its origin in the primitive exhibitionism of childhood, have through sublimation made good use of the desire to show off by becoming politicians, preachers, authors, and actors.

Our virtues are chiefly sublimated forms of our anti-social, savage tendencies. The capacity to lead may be the sublimation of a craving to subordinate and bully the weak. The barbaric unconscious mind in all of us calls for repression, the hardest lesson in life for young and old alike. It is in the struggle for repression, not merely of conscious longings that are deemed evil, but of deep-lying *unconscious* cravings—that so many people of all ages from schooldays to senescence escape, as it were, into neurosis.

The preservation of a sane mind in an octogenarian must obviously begin long before that age is reached. I contend that the *mens sano* can be protected by education. But I am using the term education, not in the orthodox or academic interpretation, but in the immensely broader connotation of modern psychology. In the most vital matters of human life there are few indeed who do not stand in need of re-education. The two subjects of supreme import-

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ance for an understanding of life are almost wholly neglected by the mass of teachers. Physiology and psychology are the key studies for an understanding of human nature, the inter-relation of body and mind, the care of the body, and the conduct of life. But these studies are not included in the ordinary curriculum of the schools and colleges. Physiology is regarded as the exclusive study for doctors; and as for psychology, the average man and woman do not even know the meaning of the term.

A London lawyer asked me if "psychology meant spiritualism," and an editor asked me how to spell the word. How can we hope for wisdom in authority, when the leaders are ignorant of the structure and functions of the body and mind, and of the meaning and motives of human behaviour?

The prevailing ignorance of sex psychology is a root cause of the ever-increasing neurosis of our age. The conflicts arising from the fundamental instinct of sex are incalculable, and these conflicts are the result of our shame-faced attitude towards facing the facts of life. The unhappiness of old age is frequently due to a fantastic misunderstanding of the erotic impulse and its all-pervading influence. Those who have sown in ignorance reap in pain.

The nervous disturbances of senescence are the source of much mental and physical suffering. Psycho-analysts state that the old are not amenable to treatment. After fifty, the mind is often incapable of re-education. This may be true of the majority of middle-aged persons. But unless the brain has

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become senile prematurely, psycho-analysis should prove effective in resolving unconscious complexes.

Only a few, even among the educated, know themselves. An old man or woman may know no more of the operation of the mind and the emotions than an adolescent. Yet the old pride themselves upon "the knowledge of human nature" that the years bring. Experience does not always teach. There are multitudes of people who are quite unable to profit by a lifetime of "experience."

There is in the male sex a stage of life corresponding in some degree with the climacteric in women. This crisis is later in men than in women, as a rule. After fifty-five, according to the text-books, most men notice decline in sex potency and a waning attraction towards the opposite sex. Before this period there is often an exacerbation of erotic tension. It is this last flaring up of the instinct that leads some middle-aged, and even septuagenarian, men to the altar for the first, second, or third time. It is also the instigating factor in cases of seduction and indecent assault committed by old men.

The interdependence of body and mind is often curiously illustrated during the critical climacteric period in a man's life. A man who has lived continently, the husband of one wife, suddenly develops the traits of Don Juan, or becomes overwhelmingly fascinated by another woman, and repeats the ardour of early manhood. Other men at the climacteric are attracted to young girls. Such attraction, in a sublimated form, may lead to a happy and mutually

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stimulating friendship, as in the case of foster-fathers and uncles. In other cases, the impulsion may lead to social misdemeanour and criminal acts.

Unromantic as it may seem, the freshly-aroused sentiment of love in an ageing man has frequently a purely physical cause. An enlarged prostate gland may have a dominating influence upon the emotions. Ovarian changes in women at the menopause often result in a revived interest in love, a sentimental passion, a marked erotomania, or nymphomania. Old women have been guilty of corrupting young boys; but fewer of these charges come into court than in the case of men offenders.

Various peculiarities of behaviour are noted among both men and women at the climacteric. Women may develop kleptomania, which has been clearly shown by Stekel and other investigators to originate in sex repression. Men may show unwonted irritability and bad temper in the office and the home. There is a feeling of tension, malaise, and recurrent psychic depression. Emotionalism is quickened, and a strong man may become hypersensitive, and may even shed tears in secret. There is regret for the lost days, and a craving for new sensations and excitements.

Both sexes, with an alcoholic bias, are prone to excessive indulgence at the climacteric, and many men and women compensate for the lack of love satisfaction by resort to the bottle. Women suffering from ailments of the genital system are often urged to drink as an alleviation of their pains. Ill-mated spouses at the climacteric frequently become

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alcoholics. I have referred at some length to the aberrations of conduct in women in my book "The Critical Age of Woman."

The preservation of the mind in the last years of life may be achieved by exercise of the brain, an absorbing occupation, the pursuit of a hobby, the cultivation of the social instinct, and above all by unselfishness and acts of kindness and charity.

Senile dementia is a tragic, pitiable state, dreaded by the ageing. It is more frequent in women than in men, and this may be due to the intensely repressed lives of a multitude of women in the cultured races. "Second childhood" is the final stage for many aged persons of both sexes. It has many symptoms, such as insomnia, or extreme somnolence, morbid fears, obsessions, hypochondria, loss of memory, mental confusion, constipation, and moral degeneration.

The causes of a physical character are alcoholic poisoning, syphilis, and chronic rheumatism. The brain is worn out. Is this involution always the result of hard mental toil? I suspect that the dementia of the old may be the penalty paid for a long life of flight from reality, of fantasy thinking instead of scientific observation and reflection, of an incapacity to understand oneself, of a slow process of brain enfeeblement through shirking actuality, and the facile acceptance of myths and illusions and superstitions; in a word, the result of long "lying abed in the unclean straw of intellectual habits." We do not find bad instances of mental senile decay in the athletes of thought.

PLAY among animals and men is a preliminary training for work. A cat learns agility by gambols with inanimate things until it pursues its first bird or mouse. Children imitate the work of adults in their games. Professor Parmelee explains play as "the expenditure of energy purely for the sake of gaining pleasure without being directed towards any useful purpose." Many scientific discoveries have originated in play. The play of children reveals their bent, and their earliest recreations often become the serious work of their lives. Play is a preparation for life's adult activities.

Most persons would prefer play to work; but through a long training in repression, they are able to control the impulse to win pleasure from mere amusement. This repression is often so rigorous that the play-instinct and ability are lost. I have heard a man in the civil service lament that the days of superannuation were approaching. He feared *ennui* because he had no play interests. He was unable to appreciate the priceless blessing of leisure to live.

Charles Lamb, in his delightful essay on "The

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Superannuated Man," writes: "I was fifty years of age, and no prospect of emancipation presented itself. I had grown to my desk, as it were, and the wood had entered into my soul. . . . From a poor man—poor in time—I was suddenly lifted up into a vast revenue; I could see no end of my possessions. I wanted some steward or judicious bailiff to manage my estates in time for me. . . . But I know that my resources are sufficient; and now that those first giddy raptures have subsided, I have a quiet home feeling of the blessedness of my condition. . . . I have worked task work, and have the rest of the day to myself."

D. H. Thoreau, who retired from pencil-making, and built himself a hut by Walden Pond, said that "the proper business of mankind is walking in the woods." What would Sir Jeremiah Hustle, the human steam-engine, the owner and director of two factories, a coal-mine, and a number of shops, say to Thoreau? He would admonish him for being an idler. He would deride his simple activities, and affirm that watching wood-chucks and finding minnows in brooks never did anyone any good. He would say that every man *ought* to work, and by work he would mean some form of industry more or less irksome and exacting. He would probably grow hot, and call Thoreau an idiot or a fool.

The Sir Jeremiahs have no invincible impulsion to play. They have found recreation in business. Their work is to them of the nature of play, and holidays bore them. One can understand this

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attitude of the highly-successful princes of commerce. Leisure and play, the gifts of the gods, are not for them. Some of us may envy Sir Jeremiah. But others will say: "These men lay waste their power, getting and spending. It is not all of life to work, even though work is pleasurable."

It is the mental attitude to work that makes it delightful play, or intolerable drudgery. Obviously, Sir Jeremiah would be incapable of understanding the motives that urge men to undergo hardships and perils in the pursuit of pleasure. Many kinds of play, such as athletics, mountain climbing, cycling, digging in a garden, and walking excursions are hard work. But the psychic attitude towards these severe exercises renders them delightful to some men. They are a relief from work of the compulsory sort. They may be even restful in comparison with monotonous, uncongenial employments.

The old man who knows the value of play for the regeneration and the hygiene of body and mind, has no fear of a bored senility. He may be a much busier man in his retired days than he was during the long years of work. The man who can play generally dislikes inactivity. The contemplative man is not an idler. According to Plato, he is the highest type of man. Many a man who has a hobby is serving the community. An entomologist, for example, goes butterfly collecting, and learns some facts of enormous importance to agriculture. A village angler may discover what the learned ichthyologist has never imagined.

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Some of the best citizens, in the utility sense of the term, spend a large part of their time in play. It may be bee-keeping, horticulture, or simple "walking in the woods." These enthusiastic hobby-hunters enlarge the general store of knowledge. I do not agree with those who think that a man is likely to be an inferior stockbroker or shopkeeper, because he has absorbing interests apart from his business. The effort of concentration required to become a successful fly-fisher is a training in concentration upon work. The same may be said for other kinds of field sport. The nerve essential for taking a big fence in the hunting-field is the nerve required for a big deal in the city.

There is a host of dull old men and women who do not know how to play. We meet them at holiday hotels, people who sit in the lounge, yawning and snoozing, and who only show animation when the dinner-gong booms. Many of them are grossly obese through lack of exercise, and many appear to suffer from fatty degeneration of the mind. They die slowly and ungracefully of having nothing to do or to think about, a very common disease in "the idle rich," and the bane of an immense number of middle-aged women of the upper class. One wishes sometimes that play was compulsory for these people, as it is in some schools.

Probably some young men and women will read this book, and to them I say: "Encourage and cultivate your play-instinct." The choice of recreation must be decided in accord with individual

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proclivity and temperament. I have never played a game of cards or billiards. These games do not attract me, partly because they are played indoors, and partly because I regard them as rivals to the more enjoyable recreation of conversation. But each one to his taste. I do not decry the value of bridge or billiards as amusements for those who enjoy them.

From the health standpoint, outdoor sports and games are unquestionably the best at any age, and the man or woman who has "ranged the fields for health unbought" has a much better chance of a tolerable senility than those who have dreaded the scorch of the sun, the sting of winter rain, and the buffets of the north-easter.

The plea: "I have no time for play" is often heard. The man who will not find time for recreation is either lacking in the universal craving for play, or he finds his work more absorbing and pleasurable than sports or pastimes. For the normal and the average, some form of play is imperative, and the nature of the play is less important than its recreative character. A difficult game of chess may be relaxation for one type of brain, but hard and unattractive activity for another. Everything depends upon enthusiasm and interest. Don't play golf merely because it is the fashion. Play it because you consider it the most interesting of games.

Busy people of both sexes should make time for play as a means of preserving the activity essential for business. Play is not a waste of time. In the

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long run it is a saving of time. Various tests in the psychology of industry, practised in several countries, show that shorter hours of labour and increased recreation result in a bigger and better output of work.

Speaking as one who earns his bread at the point of the pen, I am able to testify that my brain is more fertile, and composition an easier task, if I throw down the pen at the first signs of fatigue, and hoe my garden, or ride a bicycle. On the day following several hours in the open air, spent in some form of play, or the exchange of mental for physical exercise, I return to the desk with zest and a sense of refreshment.

Spurring the tired brain and nervous system is bad economy, and the ensuing exhaustion may become serious. The brain-worker needs periods of brain rest; but the trouble is that a hyper-active brain becomes almost incapable of complete inactivity. The overtired mind continues to work in the hypnagogic state between waking and sleeping, and sometimes during actual slumber. This is often a premonitory indication of chronic over-fatigue, which the prudent will heed in time. These fatigue symptoms are only increased by a resort to such fillips as alcohol or drugs. The only remedy is rest, or the substitution of play for serious work.

Sir Walter Scott rose early and wrote till noon. The rest of the day he spent out of doors. Gladstone, "a grand old man" physically, realized the necessity for a change of work, and wielded an axe for

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recreation. "A change of work is as good as play." A man who has been tending a machine for eight hours of the day will find digging in his allotment a pleasant occupation. The recreations that make us forget the cares and worries of our working hours are the most to be commended in middle age and in the closing years of life. I am told that the concentration needed in a round of golf banishes thought upon all other matters. In my own experience, fly-fishing for trout is a sport that makes one oblivious for the time being of the low state of the personal exchequer, business worries, and even fatigue of the mind. Some of the happiest and most peaceful hours of my life have been passed on the banks of lonely streams and lakes in Scotland, Wales, and Ireland.

I am sorry for the old man who has lost keenness for play. By good fortune I have retained my youthful zest for the sport of fishing, and to this I attribute in a measure the health that I enjoy. The rings of a rising trout, or the splash of a salmon, still thrill me; and after a few days with the fly-rod, I feel several years younger. I know a few ageing men who have become anglers, and they confirm my experience. I regard fly-fishing as an ideal recreation for the old. I have fished with anglers of over eighty. A man is never too old to fish. Some women, too, remain enthusiastic fly-fishers till an advanced age.

Many hale veterans of both sexes are seen in the hunting-field every season. All field sports favour the chances of longevity and a vigorous old age.

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Lord Lonsdale, Sir Claude de Crespigny, and Lord Lambourne are instances of the healthfulness of outdoor sport. There have been straight-riding masters of hounds of over seventy.

But "the sport of kings" is the privilege of the well-to-do. The poor man cannot afford a hunter and a subscription to the hounds. He can, however, follow the beagles, on foot, for a small contribution to the hunt fund. I began regular beagling after the age of sixty, with distinct benefit to health.

I do not believe that a moderate amount of running is injurious after middle age, unless there is heart derangement. Slow "shogging" is scarcely more exertion than brisk walking; but sprinting should be avoided. Beagling is a winter sport which would keep many elderly men from realizing the advance of the years. The exercise keeps the muscles elastic, and oils the joints, and gentle running causes an increased intake of oxygen, and opens the pores of the skin. I feel fifty per cent. better the day after a hunt.

Walking is the exercise *par excellence* for the senescent. I do not advise time or distance beating walks for the elderly, but sedate excursions of ten or fifteen miles at the pace of two and a half miles to three miles in the hour. Go slow, and you will be able to go far. Have an object other than mere exercise when you go walking, let it be bird-watching, the discovery of a haunt of unfamiliar wild flowers, or any other form of nature study.

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In a wild pass of the Highlands, in Perthshire, I met an aged man, accompanied by a black spaniel. We walked together for a mile or so, and my companion told me that he was spending a well-earned retirement in seeing the beauties of his native land. He had been months afoot in Scotland, and out in all weathers; and he was without an ache or a pain.

In early manhood and middle-age, the amount of daily physical exercise should be the equivalent of walking nine miles. Comparatively few persons living sedentary lives take as much exercise as this daily, with the result that the muscles become flabby and the whole system is enfeebled. An old man should walk about five miles every day, and a woman at least three or four.

Gardening is a form of play well suited to persons of over sixty. I do not recommend the sexagenarian, who has never handled a spade, to dig for a two hours' spell at the beginning of his horticultural operations. Digging is a fine exercise, but it is necessary to educate the muscles for this work slowly. An ex-cabinet minister was advised by me to try gardening as a remedy for "liver." He dug vigorously for half an hour, and then threw down the spade, declaring that digging ought to be done by a machine, and that he had a feeling of giddiness and a terrible backache.

It is well for the old to rise fairly early, and take a stroll in the garden before breakfast. I know a vigorous septuagenarian who rises at six in summer,

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and clad in his dressing-gown, goes to look at his flowers while the dew is on them. At seven he returns to bed, and sleeps till nine. Later in the day he potters around with a rake, a hoe, or a pair of shears. He attributes his sound health to the hours spent in his garden.

The atmosphere of a garden is soothing and healing for the ailing and the old, and the sense of well-being after a day's garden work is very palpable, if the work has not been too rigorous. Gardening is one of my chief hobbies, and the older I grow the keener becomes my interest in raising flowers and vegetables. Elderly women will benefit by spending their play hours in a garden. Work in a garden is an excellent preventive of the depression, "nerves," and irritability in both sexes.

In these days there are a number of "physical culturists" who proclaim that no one need grow old, if we will only spend a few minutes, or an hour or two, daily in practising prescribed exercises. The authors of these manuals give us pictures of themselves in Grecian poses. They exhibit great rolls of muscle on the chest, arms, and abdomen, and look like Samsons or Sandows.

Mr. Sanford Bennett, "the man who grew young at seventy," gives directions for exercises that can be performed in bed, and he claims that his system has renewed youth in the old. "All muscles and all organs," he states, "increase in size, strength and elasticity when properly exercised. This is the

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principal secret of health, strength, elasticity of body, and a long life."

I agree with this statement, and I am quite willing to accept the evidence that in many cases systematic physical exercises promote general health, and alleviate illness. I have, however, no personal experience of the benefits of therapeutic gymnastics. I have met Lieutenant Muller, a teacher of physical culture, and he appeared to be a model of health and strength. Sandow I have seen and admired, and I regret that he did not live to a riper age.

On the question of "physical jerks," I retain an open mind. Certainly, "jerking" seems a rather drastic process for old joints and muscles, and I would hesitate to recommend it. On the other hand, there are certain abdominal exercises such as those devised by Mr. Hornibrook, which undoubtedly prevent constipation from becoming a grave menace to health and a long life. The abdominal muscles are perhaps the least used of any muscles in daily labour, and for this reason hygienists have designed specific exercises for their development. Undoubtedly, the wasting of the abdominal muscles of women causes much suffering in parturition, and is injurious to the whole reproductive system.

If other kinds of exercise are lacking, the best substitute is the judicious use of certain mechanical means, such as india-rubber chest expanders and muscle developers, light dumb-bells and Indian clubs. The object of these exercises should not be the accumulation of enormous, bulging muscles, but

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the promotion of circulation, a toning of the system, and increased respiration. The capacity to play with fifty pound weights is no proof of general health and a high chance of longevity. Many prodigies of muscular strength overstrain the heart, and die at a comparatively early age. They tend also to neglect mental exercise.

There is always the danger that "physical culture" may become a fad and an obsession. Undoubtedly, there are more injurious obsessions than constant solicitude for adding half an inch to the chest measurement; and I would be the last man to discourage youths from gymnastics. But culture of the body by means of set exercises is not the only means of preserving health, and there is a tendency among the disciples of "physical culture" to over-estimate callisthenics.

Bicycling is a good exercise for young and old. But the septuagenarian must not attempt to beat records. He should ride a low-g geared machine at a modest pace, and dismount at the hills. I find fifty miles in a day a refreshing exercise in winter. Cycle touring is, next to walking, the best way to see a country; but old people must guard against over-fatigue and heart strain, and it is risky to ride far in very hot weather, or to attempt hill-climbing.

Tennis, rowing and swimming will benefit the aged, if they are careful to avoid overstrain. I am a fanatic of the open air, and my natural environment is of more importance than the interior of the house that shelters me. I am physically energetic, and I

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take a delight in using my muscles. This is idiosyncrasy, and I know well that many persons are not born energetic, and do not appear to require an outlet for their play-instinct, or feel a need for bodily exercise.

As in questions of diet, so in exercise. It would be unreasonable to set up general rules, and say: "If you don't walk so many miles a day, or hoe your garden, you will die prematurely and live unhealthily." Some persons require more active exercise than others. Much depends upon the functioning of the internal ductless glands. Men and women with active thyroids will be energetic, and they will need less rest than those who have deficient thyroid secretion. The interstitial gland in men and the ovaries in women also play a conspicuous part in the determination of energy or passivity.

Hobbies are a source of interest, and when life ceases to be interesting we are moribund. People without hobbies are often the victims of boredom and of malcontent. Any hobby, even the collecting of brass buttons, is better than none. Every child should be encouraged to find a hobby.

A love of Nature, let it be for scenery, or for gathering shells, is a health-giving influence, a solace, and an inspiration. This passion is by no means universal. Many persons are like the Frenchman in the Alps who declared that he "abhorred the beauties of Nature."

I remember a magnificent sunset among the mountains of North Wales, which almost brought

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tears of rapture to my eyes, but bored my man companion almost to tears of another kind. I have walked through the Pass of Llanberis with a man who saw nothing to admire, and grumbled because there was no shop where he could buy a box of matches. And I have travelled often in the train with people who read newspapers or go to sleep, when passing through a magnificent Highland glen, or by a wonderful rocky coast.

The love of natural beauty, especially for stern and wild scenes, is a devotion for those who are capable of admiration. For myself, I would sooner look upon mountain peaks, wreathed in mist, than at the noblest cathedral in Europe. And the songs of the thrush and nightingale at dawn delight me more than the notes of the finest human singer. This again is idiosyncrasy, and I am not suggesting that persons who prefer architectural to natural loveliness have very poor taste.

The appeal of natural beauty is for some minds a supreme joy, the surest anodyne for suffering, and an escape from the ugliness of modern life in cities. Einstein, speaking of scientific curiosity and the pleasures of art, says that the motive is "a longing to escape from everyday life with its painful coarseness and desolating bareness, and to break the fetters of their own ever-changing desires." And of the love of Nature, he adds: "It is a motive force of like kind to that which drives a dweller in noisy confused cities to restful Alpine heights whence he seems to have an outlook on eternity."

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Environment is an immensely important factor of bodily and mental health. A nostalgia for green fields, or for tawny moors, is a real and serious disease for certain types of men and women who are compelled to live in a dingy, hideous town. A man of the hills feels ill and depressed in a flat, featureless region. There are tracts in the British Isles that have been despoiled of all natural beauty. This ugliness has its effect upon the character of the inhabitants. "I would die if I lived in such a place," is a not uncommon remark, which we are wont to regard as an exaggeration or affectation. But there is no doubt that environment has frequently a very malign influence upon the physical and emotional being. There are places that invoke thoughts of suicide, and places where we feel physically ill.

Of course, there are many persons who would not exchange the charm of "the barrows in the Walworth Road" for Kynance Cove or Dovedale. They are happy in their environment. There are multitudes of people who enjoy noise, dinginess, and dirt; otherwise there would not be a steady influx into the towns. One man's happiness may be another man's despair. Arnold of Rugby grew weary of the tame, cultivated fields of the Midlands, and yearned for the lakes and fells of the north. But a man from Ambleside might find "Paradise enow" among the cabbage plots of Essex.

To my mind, environment is next in importance to a provision against hunger. Much of the social

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unrest, nervous disturbances, drunkenness, vice, and unhappiness of civilized communities is due to hostile environmental influences. The only way to counteract the effects of an unfavourable environment, to which one is condemned by force of circumstance, is to escape from it as frequently as possible.

The motor-car, and even the humble pedal bicycle, are used by an increasing number of people as a means of escaping at the week-end from depressing surroundings.

"The call of the wild" is likely to become stronger among an urbanized population. There is a positive yearning for "the wind on the heath" among the increasing number of summer campers, pedestrian tourists, and students of Nature.

The stimulus and refreshment of contact with Nature is a real aid to health of body and sanity of mind. The scenes of rural delight dwell in the memory, and cheer many dull hours of toil. The books that one finds in the running brooks are often more educative than the works of the philosophers and moralists. Pantheism may become a sustaining, invigorating faith. Those who cannot gaze with wonder and joy upon a bank of ragwort, with gorgeous peacock butterflies flitting, or upon the reflections of mountain peaks in a still blue tarn, are deprived of one of life's chief consolations. "'Tis born with all: the love of Nature's works," writes Cowper. I think the "all" should be "many," for there are minds quite supine to natural loveliness. Æsthetic ardour for rural scenery is a comparatively

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recent development in culture. There are many townsfolk who have never felt Thomas Hood's nostalgia for the country :

“ What joy have I in June's return?
My feet are parched, my eyeballs burn,
I scent no flowery gust;
But faint the flagging zephyr springs,
With dry Macadam on its wings,
And turns me 'dust to dust.' ”

Oh! well may poets make a fuss
In summertime, and sigh '*O rus!* '
Of city pleasures sick;
My heart is all at pant to rest
In greenwood shades; my eyes detest
This endless meal of brick! ”

ALL the organs of the body are subject to fatigue, and require periods of rest. The organs that are least rested by civilized human beings are the stomach and the liver. "Overwork" is not only muscular, or brain work, or an overtaxing of the nervous system. The digestive organs are far more overworked by the majority of people than the brain. The sedentary man or woman who eats three full meals a day, consumes too much protein, and indulges in in-between snacks, aperitives, cocktails, and tea, overworks the alimentary organs.

Many breakdowns in health at middle age are the result of undue taxation of the stomach, liver and kidneys through eating too frequently and too much. The unfortunate stomach is allowed no rest. Some persons appear to regard that organ as a furnace that requires incessant stoking. They complain of fatigue through overwork. And no wonder, for they constantly compel the digestive apparatus to perform impossible tasks.

Rest from the daily round of work, whether of muscle or brain, may take the form of enjoyable

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recreation and of mental distraction. Complete relaxation is difficult to attain, and some people are apparently incapable of "lazing." Nervous energetic folk, "live-wires," often wear themselves out prematurely by neglecting rest and curtailing sleep. Some discipline is required to cause such persons to cease all activity before they are suddenly faced with exhaustion.

There is a difference between resting and rusting. Most work is healthful, and most idleness harmful. But there is a happy mean between undue exertion and sheer indolence. Fatigue poisons in moderation do not injure, but their excess accounts for physical and mental depression in a large number of cases. Every man must discover for himself the best method of rest. A day in bed may be irksome for one person, but beneficial for another. Some brains require longer periods of inactivity than others, and it would be rash for every senescent to act upon the counsel of the Duke of Wellington that "when it is time to turn round in bed, it is time to turn out."

No fixed rules as to the hours spent in sleep can be safely formulated. There are light sleepers, heavy sleepers, and insomniacs. There are persons who thrive upon six hours of slumber, and others who are still sleepy after ten hours. No doubt, the sleeping period can be prolonged or shortened by habit; and there are persons who have trained the brain to complete somnolence, while others rarely experience profound sleep. I know an old man who informed me with alarm, that he was beginning to

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experience wakefulness in the early hours of the morning. He had been a hearty sleeper for over sixty years, and was ignorant of the fact that a large number of healthy persons are liable to awaken once or twice during the night.

Insomnia, or loss of the capacity to sleep, is a common and little understood malady of civilized people. Its prevalence increases with the advance of civilization in the Western nations. Insomnia attacks may occur in adolescence through emotional conflicts, and there is no age in which we are quite immune from the risk of disturbed sleep.

A complete incapacity to sleep would probably cause death in a few weeks.

Insomniacs who say that they have sleepless nights, sleep unconsciously though it may be only for one or two hours. The disease is a very real menace to health of body and mind, and endless artifices from hop pillows to morphia have been devised for procuring "Nature's sweet restorer, balmy sleep." To lie awake hour after hour, with a craving for oblivion and rest, while the mind is occupied with distressing thoughts, is a real torture. That way madness lies.

There are numerous general rules for securing sleep. The best known are :

1. Guard against hunger or repletion before retiring for the night.
2. Do not have too many or too few coverlets on the bed.

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3. Keep the bedroom well ventilated.
4. Avoid a too high pillow.
5. Cease the day's work, especially of a mental character, an hour or two before going to bed.
6. Combat the fear of "a bad night," and cease thinking when the head is on the pillow.
7. Avoid cold feet in winter by wearing woollen socks, or placing a hot-water bottle to the feet.

Most of these prescriptions are sound enough, but unfortunately their application is not always successful. Many chronic insomniacs have tried these devices, but in the end they resort to soporifics. Some cases of drug addiction can be traced to the use of substances that are reputed to produce the somnolent state. It is stated by some constant victims of insomnia that they have not obtained sleep for many months without the use of a drug.

The chief physiological cause of sleeplessness appears to be an increased flow of blood to the brain. This is why so many brain-workers are prone to insomnia. To ensure sound sleep, the brain should be in a somewhat anæmic condition. Persons troubled with disturbed and inadequate sleep often find relief by taking some kind of food, such as warm milk, during the night, thus causing a drain of blood from the congested brain to the stomach.

Exercise in the open air is a remedy in some cases, and the advice "after supper run a mile" may be taken in a broad sense. Certainly, one's experience shows that sleep comes readily after a day's sport

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with the rod or gun, or a tramp over the downs, if the exertion has not been carried to the point of exhaustion. Over-activity of body or mind will frequently induce insomnia. Exercise, warm bathing, skin friction before retiring for the night, and in some cases reading in bed, are aids to wooing sleep.

Insomnia is a common symptom of anxiety-neurosis, resulting from an unsatisfactory sexual life. The malady is apt to assail widowers and widows, and vigorously-sexed persons who are deprived from normal gratification. Unquestionably, healthy sexual intercourse is a natural soporific. It relieves the pressure of blood in the brain, and produces a soothing lassitude of the whole body. There seems to be little doubt that obstinate insomnia is the consequence of emotional complexes in the unconscious mind. The repressed emotions may be entirely shut out from consciousness, or they may give vague hints of their presence in dreams and nightmares.

Insomnia is a functional disorder, and the root cause is most probably psychic. This view has confirmation in the fact that physical means for procuring sleep so often fail. While the hidden mental conflict is working in the unconscious mind, the hop pillow or the hot-water bottle can have only a slightly alleviating effect. For the cure of insomnia of serious type, the aid of a psycho-analyst should be sought.

There are physicians who confess frankly that they know no cure for insomnia. The disorder is certainly

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one of the enigmas of pathology; but it has not, until quite recently, been examined by the scientific psychologist. Sleep is a phenomenon as yet little understood. One thing is certain, the dreams of sleep play a very great part in our lives, and are a clue to many of our apparently incomprehensible longings and actions. It is probable that a repercussion of our dreams, even if we do not remember them, has an influence upon the emotions and thoughts of the day following.

THE cares of life tend to shorten its spell and to disturb healthy functioning of body and mind. Although a cat is said to have nine lives, we are told that care killed a cat. An absence of worry means euphoria, a sense of well-being, while its presence causes dysphoria or ill-being. The natural man seeks pleasure as the highest good, and gratifies every instinct, social or otherwise, whereas the civilized, or cultured, man curbs continually his primeval desires, and is confronted by arduous repressions from the nursery to the grave.

Carking care is the common lot of the mass of people of advanced civilizations. Some persons have a much larger share of sorrow than others. Their luck seems to be always "out." There are lymphatic, lethargic people who aver that they never worry. There are "shut in" or reserved persons, who burn their own smoke and rarely complain of fate openly; but they are probably more exposed to the risk of dementia præcox or melancholia than those who feel relief in railing at destiny.

Care and unhappiness have three paramount

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causes: a too strenuous and continual fight with poverty, ill health, and a disappointing love-life.

There are many minor factors of care, such as an acute sense of inferiority, remorse for ill deeds, family dissensions, and frustrated ambition. Every heart has its own secret bitterness.

Most men and women of the neurotic constitution get into trouble, and seem to attract it. Hyper-sensibility is associated with genius, but this quality is a handicap in the contest with a coarse, tough-minded world. There is a common saying that to succeed materially, one needs a hard heart and a strong stomach. But what an unfamiliar world it would be if there were no tender-minded people. There would be no one for the tough-minded to drill and exploit.

Since the days of our hairy primitive ancestors, men have sought happiness with avid yearning, and the whole creation has groaned and travailed. Hope springs eternal, and makes life bearable for the disappointed and frustrated. I do not propose to discuss the question: "Is life worth living?" It may be taken for granted that the mass of people find life at least fairly tolerable, and that a proportion are happy. If it were otherwise there would be a larger number of suicides and more mental disease. There are unhappy people who confess that they do not care whether they live or die, but generally speaking, men hold on to life tenaciously, and have no actual desire to quit "the Vale of Tears." My

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own experience and observation have taught me that life in the civilized countries for the multitude is a cruelly keen contest, and that it is becoming more acute every decade. "For the common man," as H. G. Wells states, in "William Clissold," life is a series of torturing desires, repressions and unfulfilled hopes.

"The masses" are much less miserable than the intelligentsia and the deeply sympathetic imagine. The spectacle of slum indigence and hideousness of environment, that depresses the cultured sensitive beholder, is not appalling to the great majority of slum dwellers. An absence of the refinements and the æsthetics of daily life is not intolerable to people who have no artistic sensibility. The horror of dirt and ugliness is a result of education and training. Many primitive folk are extremely clean in their habits. It is a part of their culture. But the natural man, that survives in the civilized man, is not disgusted with the sight of heaps of garbage near his dwelling, and his insanitary practices have to be controlled by enlightened authority.

The rich, according to my experience, are rarely happier than the poor. "Indigence," as Gissing described it, "is the death of the soul," and want is a state of misery. But impecunious persons are frequently less discontented with life than wealthy neurotics.

The capacity for happiness is a heritage that some possess and others lack. I have never been able to

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decide whether mankind is "meant" to be happy. Probably an easy attainment of content would paralyse human effort.

I have asked many men and women of middle age if they would like to live their lives over again, and I have never received a direct affirmative reply. There is always an "if." "*If* I could begin again, with my experience of life." "*If* I could avoid the unhappiness and the stress that I endured in early life." "*If* I were well-to-do." "*If* I could do the work that I like." And so on. I am told that there are persons who would willingly begin to re-live their past lives, without any provisos. I can only say that I have never found these exceptional persons in any class of society.

The reality principle and the pleasure principle are in constant warfare in the human breast. Hard reality, shorn of all illusions, is abhorrent to the great majority of persons. They do not wish to know the truth. They are terrified of reality, and stop their ears, and cry: "Please don't tell me! Leave me my dreams; let me have my fantasy and illusion!" A moment's reflection upon the universal love of illusions that conduce to comfort of mind will prove how arduous is the bold confronting of reality. Almost everywhere, and among the most uncultured people, there is a longing to believe in a future life beyond the portal of death. Myriads of mankind have found solace in supernatural, purely hypothetical creeds. Millions of human beings have fought and rended each other through dissensions

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in opinion upon the reality or the validity of a dogmatic illusion.

The flight from reality represents a perennial terror in the civilized human breast, and a way of escape is found in the substitution of compensatory myth for actuality, in neurotic illness, in narcotism of the senses with wine or drugs, or in physical disorder. Many men and women become invalids through a fear of life. The very helplessness of the sick and infirm is a protection against the insupportable task of living robustly. "Conversion hysteria," the development of bodily pathological symptoms, is a common mode of flight from reality. The drug addict and the dipsomaniac seek escape in hypnotic dreams.

A substituted form of escape from reality is a supreme passion for art and poetry, or a fervent mysticism. Religion is unquestionably a profound consolation and an inspiration for many. There are nevertheless an enormously increasing number of those persons who are quite insensitive to conventional religious influences. The woman of the world, who declared that "there is more satisfaction in a well-fitting gown than in all the consolations of religion," is representative of a host of indifferentists.

The number of earnest-minded critical inquirers is small as compared with the vast number of sheer indifferentists. There are minds with a religious bias, and others to whom religion makes little appeal, or none. What, then, is the substituted consolation,

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or the source of compensation, for the innately non-religious? The desire to live is as strong in these persons as in the religious types, and many of them find their highest satisfaction in material things and sensual pleasures. The state of their souls does not trouble them; they do not ask questions of life; they experience no spiritual conflicts and throes.

It may seem irrational to question the value of religious faith as an aid in enduring the common cares of life. But we are faced with the truth that an enormous number of people are non-religious, which proves that the desire for a consoling, protecting creed is not felt by everyone. We have also the evidence that religious belief, even in the case of some of the devoutest souls, does not bring the longed-for sense of security, or happiness. The lives of many eminently pious men and women show that they were torn continually with doubts and fears, and that in some instances these anxieties were of a morbid character. From Job to Dr. Johnson, we have instances of uncertainty and unhappiness, in spite of a profound faith. Bunyan, Luther, Sir Isaac Newton, Cowper, Hugh Miller, and many other devout believers suffered acute spiritual torments. But it would be false to assert that religion has failed entirely as a consolation for the sorrowful, the afflicted, and the poor. Millions need and seek a paternal deity, a strong protector, an omnipotent ruler; and the majority of humankind have visions of another life, with a surcease from the sorrows of earth. The truly religious are frequently

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heterodox; whereas some of the least religious types are unswervingly orthodox.

How few among the faithful have the capacity for the joyous acceptance of life of a St. Francis of Assisi, or of the Spanish mystic, Ramon Lull. St. Francis, through a philosophic asceticism, found the true path to happiness. Ramon Lull was deeply religious, but he believed that science is a divine light. He taught that "he who loves not lives not," and he practised what he preached.

How pathetic is the eternal quest for happiness! For those who set out deliberately on this search very seldom discover the secret of felicity. "Those only are happy," wrote J. S. Mill, "who have their minds fixed on some object other than their own happiness; on the happiness of others; on the improvement of mankind; even on some art or pursuit, followed not as a means, but as itself an ideal end. Aiming 'thus at something else, they find happiness by the way. . . . The only chance is to treat, not happiness, but some end external to it, as the purpose of life."

Roger Bacon in his cell, preoccupied with a vain search for the magical philosopher's stone, was probably a happy man, for he made other and startling discoveries of a valuable nature. Tasso was perennially depressed, because he fancied that his meditations were heretical. Walt Whitman, who admired animals because they don't worry about their souls, was happy in his paganism. Bunyan sought the peace that faith brings to some minds. But for

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two years "the masterless hounds of hell ran over his soul, roaring and bellowing"; and he became melancholic and the victim of a delusion that he had incurred a punishment of everlasting damnation.

Visionaries, mystics, philosophers, like common men and women, have proved that there is no royal road to happiness. Some creative artists and probably more scientific inquirers, have found peace, and in some instances genuine happiness, in the patient pursuit of an ideal of beauty or of truth. William James likened science to devotion. Freud believes that the world will be happier when we have redeemed ourselves from illusions and established the supremacy of intelligence.

Prescriptions for the exorcism of care are numerous, and many are futile. One hesitates to add to their number because individual cases of sorrow and perplexity are so various. And one man's emotional anodyne may be another man's irritant. A philosophic aunt of mine assured me that poetry was her sure protection against intolerable mental suffering. But of what avail is poetry in a case of a gross, unimaginative man who ridicules poets and their "foolery"? What is the use of advising a woman of the spiritually pachydermatous order to emulate Saint Teresa, and discover a mission?

Possibly my own experience in resisting a tendency to depression, and in the endurance of inevitable care—of which I have had my share—may interest some readers. I will say, first of all, that never has

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the realization of an impending trial proved so terrifying or painful as the anticipation. I can state also, with perfect honesty, that the realization of a dream of happiness has often greatly transcended the expectation.

Some hours of my life have been so exquisite and rapturous that I have blamed myself for ever thinking that life is chiefly an effort to avoid pain. I am neither an extreme optimist, nor an ultra-pessimist, respecting my own affairs; and I have the faith that in the future the mass of civilized people will be happier than they are at the present time. I am a meliorist, in the sense that I believe in the betterment of the conditions of living through an increased employment of a much wider knowledge of human nature, and less fear of reality.

There are afflictions and woes, injustices and inhumanities that make us cry with Omar that it would be well if we could shatter the sorry scheme and shape it to our heart's desire. "Man is born unto trouble, as the sparks fly upward." And yet cannot you and I recall, among the recurring grey days of the past, hours of entrancing sunlight and joy, periods of complete reconciliation to life, interludes of ecstasy? At those moments have we not wondered at the despair that causes the reflection "my days are spent without hope," and declared that life is well worth living?

Day-dreams of happiness are an inadequate source of consolation. There is a much more effective remedy for mental stress and gloom in *work* than

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in the pursuit of distracting pleasures. I have differentiated between congenial and distasteful toil in a previous chapter, and I repeat that the man who has found an occupation that satisfies his natural bent, and provides him with a living, is fortunate. The man who is compelled to follow an uncongenial profession or trade is wise if he seeks an absorbing study, or hobby, which will compensate in some measure for the hours of irksome drudgery.

A busy man has little time for brooding upon his troubles; and many men do not know worry until they cease to work. Many persons find time to fall ill when their minds are unoccupied by business. At the onset of a mood of depression, I ask myself how much of the trouble is of physical origin, and what proportion is emotional or psychic. If a "divine despair" cannot be banished by simple hygienic measures, it can be endured with greater fortitude if the organs of digestion and assimilation are functioning normally. All disorders of the lower abdomen induce mental depression, whereas those who suffer from respiratory ailments are often comparatively cheerful. The consumptive invalid is frequently hopeful, and less subject to depression of spirit than the far more robust man with a sluggish liver.

There are griefs that baffle medicine, and must be suffered with only a hope of the assuagement that time brings. Vague unhappiness has its cause, for there is no mental pain without a definite source, though it is often hard to discover. A man may suffer keenly from a repression that is hidden from

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consciousness. These secret conflicts are the cause of the neurosis of our age, and it is only when "nervous breakdown" occurs that serious attention is aroused. Prophylaxis of the neuroses, in the view of Dr. Ernest Jones, and other medical psychologists of the new school, can only be achieved by recognizing "the impossibility of enforcing without grave harm a uniform moral standard and mode of living, to demand a uniform and inelastic standard in the fields of emotion and instinct being as preposterous and as untrue to the considerations of reality as it would be in the field of intellect."

Maladjustment to the realities of life is a salient factor of unhappiness. Yet how prone we all are to question the value of knowledge as a means of reducing individual and collective dissatisfaction with life. What are the facts? Have the wise of all ages been conspicuously unhappy? Even an extreme pessimist, Edward Von Hartmann, wrote upon "The Comforts of Pessimism," and affirmed that his philosophy pointed the way to "absolute happiness." There is no doubt that scientists with a passion for asking questions of Nature enjoy a full share of happiness, and Darwin, Tyndall, Huxley and Einstein may be taken as instances. Epictetus tells us that only the wise can be happy. Are the stupid, the dull-witted, the mentally starved, happier than the thinker to whom the world and life are fascinating enigmas? Increase your interests and you will diminish the chance of unhappiness and the tedium of life.

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All repressions induce fear, and fear kills. Taboos, inhibitions, repressions are essential in the development of a social sense. Anthropology abounds with instances of terror of the gods, the dread of forbidden ideas, the fear of supernatural forces and beings, and the sense of guilt associated with the gratification of natural instinct. "The curse of modern civilization," writes Dr. Isador Coriat, "lies in excessive repression leading to codes of behaviour and standards that are fraught with great danger."

Without repression of certain instinctive longings civilization would have been impossible. But we have become civilized through a process that involves considerable suffering and deprivation, and the tendency is towards over-repression. From our earliest years our qualities and trends are misdirected. Hereditary influences have been over-estimated. The son of a pious father is often utterly indifferent to religion, and the child of a teetotal parent is frequently a dipsomaniac. Environment, rearing, suggestion, imitation are the sources of character formation. "Childhood is one long conflict between individual instinctive tendencies and the social traditions and ideals of society," writes W. H. Rivers, an acknowledged student upon human motives and behaviour.

Why do I, a man over middle age, experience a curious sense of guilt whenever I am enjoying life intensely? Because my father, a fanatical Puritan, taught me that most forms of enjoyment were sinful. The theatre was taboo; card-playing, even without

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gambling, was interdicted; novels were lures to hell; smoking was a sin, and all forms of pleasure a danger to the soul. My childhood was saddened by feelings of guilt and unworthiness. I was a lost reprobate; terrible punishment awaited me after death for my evil thoughts and ways. My natural curiosity on the mystery of my entrance into the world, my earliest erotic manifestations, normal in every child, were condemned as impure and shameful. I was terrified into a morbid religiosity as a means of escape from the awful penalties that I had incurred by allowing my mind to dwell upon carnal matters. To this day the scars of this mental conflict remain.

Character, as Freud shows, "is composed of impulses fixed since infancy and won through sublimation." A child may be "a finished product" in the fourth or fifth year. At puberty a host of fears encompass the boy and girl, and they arise from the moral conflict between the most powerful of the instincts and codes of religion and society. Stammering in adult life, squinting, morbid shyness, a sense of inferiority, reactions in vice and crime, alcoholism, sexual perversions, mental depression, cruelty to human beings and animals, aberrant behaviour, and manifold emotional and nervous symptoms can be traced to the fears of early life.

In the adult the principal excitants of fear are poverty, sex, and illness. The dread of penury and want is less evident than the dread of the sexual impulse and its fateful resultants, because only a large minority are faced with the peril of sheer

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indigence and need. The erotic conflict is the problem for the majority, young or old, rich or poor; and the problem is, unlike the economic problem, a more or less forbidden topic. For this reason measures for handling it, in individual and social instances, are extremely difficult to discover. We frame our sexual moral codes before we have learned the facts of sex.

Every man and woman craves the fullest measure of expression, or in other words an outlet for the libido, or vital urge. The restraining power of the morality codes of cultured races is quite as strong in many instances as the primal passions, and in some cases it is stronger. "The deeper claims of the spirit are of greater importance than the discharge of erotic tensions." If free expression of the instincts involves harrowing remorse for an infringement of the moral law, then one form of fear is merely substituted for another.

It may be asked: "How do culture and the scientific spirit protect mankind against cares and fears? Is it not a fact that civilization, which is generally regarded as culture, invariably increases the tendency to suicide and insanity?" A reply to this question necessitates inquiry into the mentality of primitive and barbarous people. In primal times men were exposed constantly to peril and pain and to hunger and thirst. They were incapable of direct, or scientific, thought, and they invented myths to account for the phenomena of Nature. The savage is surrounded by terrors. He fears his deity and his

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demons, the forces of Nature, and human enemies. As Sir A. C. Lyall wrote: "The fear of ghosts is the faint shadow still left on our imaginations by the universal belief of primitive folk that they are haunted by the spirits of the dead."

The savage had to propitiate his dead ancestor, or his spirit would return to plague him, often in the form of an animal. There was an age when all men thought that the forces of Nature were controlled by spirits, some protective, but mostly malign. Animal gods were invented. The Apaches will not eat bears' flesh because a bear stole one of the girls from the palace of Montezuma, and gave her a child. The totem is sacred and protective. It may be a frog or a whale, and the tribe are descended from it. An Ojibway in trouble calls upon a wild duck to succour him.

A mass of superstitious fear has been banished by the use of the reasoning faculty and the substitution of fact for fiction. With every generation the existing superstitions grow feebler, and the sources of fear diminish. But till the final catastrophe, man will be subject to fear of the Unknown. We can, however, eliminate by education many of the fears that still haunt us from childhood to old age.

Conan Doyle, in "The Stark Munro Letters," speaks of the inner life of a young man "from about the age of puberty until he begins to find his feet a little" as a period of "shrinking, horrible shyness, alternating with occasional absurd fits of audacity

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which represent the reaction against it, the longing for close friendship, the agonies over imaginary slights, the extraordinary sexual doubts, the deadly fears caused by non-existent diseases, the vague emotion produced by all women, and the half-frightened thrill by particular ones, the aggressiveness caused by fear of being afraid, the sudden blacknesses, the profound self-distrust." Just as typhoid fever in early life may leave injury that will affect the body at fifty, so may the emotional injury of fear in adolescence leave its trace for life on the mind and character. The study of human behaviour alone can provide a true protection against excessive repression and abnormal fear; in fine, the intellect can aid, as no other power can, in lessening the cares and fears of humanity.

It is true that "civilization" increases the tendency to insanity in major and minor forms, and causes a heightened suicide rate. This seems to prove that education, which is a part of the civilizing process, fails utterly in protecting the civilized against fears and cares. The explanation of the anomaly is that civilization becomes steadily a more complex problem than our brains can cope with. The suicides in Great Britain in 1927 were the largest number ever recorded. Only a very few truly educated persons exist in the community. The mass are incapable of solving the common problems of society; because they do not know themselves. We are told that the average adult intelligence standard is that of a boy of fifteen, and we know that feeble-mindedness is

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steadily increasing in the so-called "progressive" nations.

Science has not failed. The failure is the result of a general depreciation of science, and a reverence for the superstitions and illusions of the past. As Professor Freud asks, in "The Future of an Illusion," "How can we expect people who are dominated by thought-prohibitions to attain the psychological ideal, the primacy of the intelligence?"

The protection of the mind against cares and fears favours the chance of a youthful old age, and the surest way to secure that protection is through a training of the intelligence and the sympathies, not in the narrow book-learning of the conservative academics, but in knowledge of life, and a broad humanistic outlook.

THE physical nature of woman, differing as it does widely from the physical characters of the other sex, requires its own regimen of health. Woman is not inherently such a delicate and frail being as a number of people imagine. She is hardly of "the weaker sex." She escapes some of the diseases that are prevalent in "the stronger sex"; and she has a marvellous quality of disvulnerability, which means that she recovers quickly from wounds, and is able to resist the consequences of grave injuries in a higher degree than man. It is a common boast of women that they can endure pain with greater fortitude than men. There is a strong probability, if it is not a proven fact, that women do not feel pain so acutely as men. Regarding the natural pains of childbirth, some physicians state that they cause "relatively little suffering." Nevertheless, modern civilized women, living under baneful artificial conditions, undoubtedly suffer, in many instances, the acutest torture during parturition. There are also the specific diseases of women from which men are immune.

The average woman's ignorance of her anatomy and functions is even more appalling and devastating

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than that of the average man. It may seem utterly incredible that a young woman from one of the modern schools could imagine that she was "a hollow inside," and that the sight of a picture of the viscera caused intense amazement. It is, however, a fact. And when I told this story to a middle-aged wife, she remarked: "I am sure there are many girls like that. I was myself; I knew nothing about the internal organs."

There is probably not a doctor or gynæcologist in Europe or America who would deny that the bulk of women in every class have the scantiest knowledge, or none at all, of their physiology. In an American women's college, a questionnaire upon what topics should not be discussed brought the reply "anything about the body." It need not be added that "sex" was also a tabooed subject among these youthful illuminati.

In spite of women's comparative immunity from some of the graver human diseases, their wonderful vitality and recuperative powers, their superior chance of a long life, and their smaller death-rate in infancy than that of the male sex, they are rarely as well, happy, and long-lived as they should be. The preventable diseases and deaths resulting from child-bearing are an instance of the neglect of female hygiene. The Annual Report of the Ministry of Health states that, in 1919, "a substantial number of 170,000 who gave birth to children were so injured or disabled in pregnancy or child-birth as to make them chronic invalids."

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The premature ageing of women, so indignantly resented by them, is to an enormous extent a consequence of their unhygienic lives. It is true that from puberty onwards a girl is always a little older in development than a boy; but this is no reason why a woman of fifty should be physiologically aged, or faded in appearance. The truth is that, from the onset of the menstrual function till the change of life, the great majority of women suffer disorders and ailments that are due to no other cause than ignorance of the principles of health.

The female of every species of mammalia, or suckling animals, stores up force for reproductive purposes. The ova, or future life germs, are present in an immature form in the new-born girl baby; and the preparation for future maternal function may be said to begin the earliest years of life. The reproduction of offspring is a much more complicated process in the sex that conceives, bears, and nourishes the young than in the male who simply impregnates the ovum. For this reason sex may be described as dominating and paramount in the life of woman. In the psychic sense, woman is more influenced by the organs of reproduction than man. During the years of capacity for giving birth, a woman is subject to a continual physiological process that affects the whole body and reacts upon the mind.

At puberty the individual woman's destiny is often decided for good or ill. The first profound hygienic error, for which the girl is not responsible, is the common complete ignorance concerning the more or

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less disturbing phenomenon of menstruation. To a savage mother it would seem incredible that the women of advanced nations often fail to instruct their daughters before the first menstrual crisis. A very considerable number of women in England receive no warning, and no physiological explanation of the phenomenon. It is rare to find even an educated woman who has taken the trouble to understand the function. Yet this periodicity is of enormous significance in the physical and psychic life.

Emotional injury often follows the shock caused by the first menstruation when the girl has not been prepared. There are many recorded cases in medical literature. Lawson Tait, a notable gynæcologist, said years ago: "I believe it to be the duty of every parent to give every child instruction in the nature and purport of sexual functions, how they are to be used, and how easily they may be abused. If this were done, we should not only diminish sexual diseases, but we should greatly diminish sexual immoralities."

Women subject during the whole of their lives to menstrual irregularities and disorders cannot hope for a youthful old age. Most of the disorders are preventable by hygiene, and all girls should be acquainted with the rules of health at the period, as laid down in numerous volumes on the hygiene and physical life of women, written by men and women doctors. Only the minority of women pass through the sexual and puerperal period of life healthily and normally. An enormous number of middle-aged

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mothers are prematurely old invalids, through the errors of conjugality, and a too rapid recurrence of child-bearing. In many families there is no attempt whatever to space out pregnancies. Wives have hardly recovered from the strain of pregnancy and parturition before they conceive again, and there is no rest and recuperation for the overtaxed reproductive system.

Compulsory maternity is a grave anomaly of a community claiming intelligence and humanity. A large host of married women live in constant terror of being "caught," i.e., conceiving another child. I have been told by women repeatedly that even the most maternal of mothers begin to dread and loathe marital intercourse after the birth of a third or fourth child. It is absurd to pretend that most children born into the world are desired by the parents, especially by the mothers. The economic struggle to maintain even a small family is so cruelly intense that vast and increasing numbers of the Western populations resort to contraceptive methods. Abortion, though illegal, is still practised in all civilized societies to an extent that would astonish the uninformed. Any legislative interference with the teaching of birth control methods results in widespread resort to abortion.

The fear of pregnancy, whether in legitimate wedlock or in extra-matrimonial relationships, is a very real and constant one in an immense proportion of the women of to-day. This is not a sign that the longing for children is lessening among women.

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The revolt is not against parentage, but against individual over-reproduction and the physical penalties that it involves. Moreover, woman's fight for equality with man in domestic and social life urges her to resist the injustice of being forced to bear unwanted children. As Lord Dawson and other well-known medical authorities state: "Birth control has come to stay." There can be no return to the haphazard breeding of sixty years ago.

The woman who would keep young till past fifty must not bear more children than her strength will permit without undue strain and exhaustion of vitality. She must observe the rules of sexual health from puberty through every stage of life. It is necessary that she should understand the hygiene of marriage and motherhood, and this should be part of the primary education of every girl at the beginning of adolescence. Sexual knowledge is even of higher importance for women than for men, but through "the prohibition of thought," women of the educated classes are lamentably ignorant in a great number of instances. This ignorance is the source of an incalculable amount of mental and bodily suffering.

The specific female derangements and disorders shorten life and render it unhappy for a multitude of women. Malposition and prolapsus of the womb are very common. Disease of the ovaries and uterus make life intolerable for a great number of women, married and single. Preventable miscarriage is frequent among the civilized races, and sterility

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is the after penalty for an artificial mode of living.

Due periods of rest after pregnancy are absolutely essential for the preservation of vigour in old age. Millions of wage-earning women are forced to secure labour before the reproductive organs have recovered from the severe strain of child-birth. This is one of the barbarities of civilization.

With their natural power of resistance to disease, their recuperative capacity and their tendency to live to an advanced age, women should be much healthier than they are. There is undoubtedly an improvement in the physique of the present generation of women. Girls tend to be taller and sturdier than their grandmothers, through the social innovations that permit women to practise athletics, join in men's games, and spend a larger share of their time in outdoor play and sports. Being "delicate" physically is no longer considered synonymous with femininity.

Nevertheless, female diseases show an appalling frequency. Cancer is rapidly increasing. Uterine and ovarian disorders become more complicated. What is wrong with female hygiene? Balls-Headley, an experienced practitioner in the diseases of women, states that the widespread enforced celibacy is responsible for much unhappiness and a tendency to illness. The deprivation from love and parentage is a far harder infliction upon a woman than a man. All attempts to prove that celibacy has no physical or emotional risks and ills are preposterous. Because

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many nuns are remarkably healthy, it is argued that continence is *per se* a healthful state.

The chances of youthful middle age and well-preserved senescence are much higher among those women who have experienced love and motherhood than among the celibates. In spite of the various perils of maternity, marriage still remains the more healthy condition for women. It is becoming clearer every decade that sex-love is for the normal woman a real prophylaxis for many disorders of body and mind.

Unhealthy marriage may be more injurious than celibacy. Hence the importance of a much wider and more scientific teaching of sexual hygiene. Better to live a virgin than the mate of an irresponsible partner who inflicts a dozen undesired pregnancies upon an ailing wife. Better to die an old maid than live for thirty years with the neurotic trials induced by an ignorant spouse, or to bear children for a husband who is hopelessly diseased.

The general hygiene of women is more closely associated with sexual health than in the case of men. Diet, exercise, and the proper care of the alimentary tract all bear upon the capacity for a satisfactory married life and the bearing of children. I have already referred to the ravages caused by the neglect of the bowel excretory function. It is necessary to point out once more that constipation is the curse of a host of women's lives. Lawson Tait testified that only those who have had wide experience of the habits of women, as in an infirmary practice spread

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over many years, can form an estimate of the prevalence of chronic constipation and its direful consequences.

No habitually constipated woman can expect to retain a youthful appearance in senescence. The years of auto-intoxication leave their inevitable trace upon the whole organism. Girls should be trained in the nursery stage to evacuate waste products from the bowels at least twice a day, and this practice should be continued throughout the whole of life. Many of the painful and destructive symptoms of an ovarian or uterine character are associated with constipation. Inability to experience orgasm in intercourse, an abnormality that causes much married misery, is often the result of bowel inactivity, leading to an accumulation of poisonous faecal matter in the intestines. Pregnancy, delivery, and suckling may be attended by disorders induced by constipation. It has not been proved, so far as my knowledge goes, that women have a greater innate tendency to costiveness than men. But it is well known that women are, as a rule, more liable to constipation than the opposite sex.

One cause of the great incidence of constipation in women is, I believe, to be found in the fact that most women drink much less fluid of any kind than men. I am not defending the masculine habit of constant tipping, but it must be granted that beer and whisky and soda have a laxative effect. It is the common experience of men that there is a free motion of the bowels the day following a carouse. I have often

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heard the remark : “ So long as I drink a fair amount of beer, I have no need to take pills.”

For various reasons women drink less than men of any beverages. Free indulgence in liquids causes a bladder activity, which many women are careful to avoid. Women of a sedentary life, who take little exercise, do not perspire normally, and are therefore less liable to thirst than men. It is a difficult matter to induce women to drink a sufficient daily amount of water.

Hygiene of the menstrual period is neglected seriously by a great many, probably the majority of women, and this neglect is an undoubted factor of premature ageing. Insufficient attention is given to ablution, and morbid conditions arise. Rest for at least one day a month is necessary. Unfortunately in this age of frantic hustling in business, or the pursuit of pleasure, very few women take a complete rest at the onset of the monthly course. Hence the number of disorders and diseases of the genital system in later life. It has been stated by medical authorities that only a minority of women in the civilized nations menstruate normally.

Women in the majority are home-abiding beings, and their days and nights are spent in more or less polluted air. The country girl of the upper classes, who hunts two or three times a week, and the land-working girl are ten times more robust than the pallid, anæmic typist or seamstress of the cities. The youngest old women are almost invariably those who have been fond of the open air.

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Anæmia, or blood deficiency, is a common ailment of girls between the age of fourteen and twenty-two, and is likely to occur at any age. The anæmic woman is always below par on the physical plane, and liable also to suffer psychic disturbance. Anæmia heightens the affectability of women. This handicap on activity of body and mind is severe in the case of girls studying hard to pass examinations, and women workers who are compelled to strenuous exertion in sports.

Woman's blood is more watery than that of men, but it is certainly not poorer in quality. Full-blooded people are not models of health unless the blood contains the requisite amount of hemoglobin. With chronic anæmia there is an irregular appetite, weakness, defective nutrition, and sometimes marked loss of weight. This disease can be remedied by rational diet that produces good blood and contains iron. Such vegetables as water-cress and spinach should be eaten daily.

Cod-liver oil, extra fats, milk, and butter should be taken regularly when there are symptoms of deficiency of blood, pale features, a poor circulation, a tendency to shivers and cold feet, and general lassitude. Exercise out of doors in moderation is a great aid. Quinine has proved useful in many cases. Stout, port, and Burgundy are often prescribed.

The clothing of women is more hygienic to-day than it was fifty years ago. The short skirt gives freedom to the limbs, and is a great improvement upon the dragging, germ-collecting gowns of our grandmothers. Tight-lacing is said to be abandoned.

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This is not quite correct, for stays and corsets that constrict the abdomen are still worn, and some of them are designed specially to compress the waist.

High heels are now in fashion once again. They are injurious to the spine; they cause bulging calf development, and a tottering, unnatural carriage. There is not a word to be said in favour of this absurd and ugly fashion. High heels often cause sprains and falls. The fashion is derived from shoe fetishism, a form of degeneration from which some men suffer. This perversion has been studied by several authorities on the psychology of sex.

Woman's dress frequently hinders outdoor exercise, especially in winter. There are many women who never go walking in the country in the cold, wet months for fear of spoiling their shoes and stockings. The excuse is often heard: "I hate mud, and the rain will spoil my hat." Women who attach a higher value to their dress than to healthy exercise in the open air will not enjoy a youthful old age.

All normal women wish to preserve their physical charm. But the ordinary methods of "beauty culture" are generally irrational, and tend to hasten the signs of fading youthfulness. Cosmetics for improving the complexion, and concealing the evidence of approaching old age, usually have the opposite effect. More than two hundred years ago, La Bruyère, referring to the custom of using pigments for the face, wrote of women: "If it is the men they desire to please, if it is for them they paint and stain themselves, I have collected their opinions, and

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I assure them, in the name of all or most men, that the white and red paint renders them frightful and disgusting; that the red alone makes them appear old and artificial; that men hate as much to see them with cherry in their faces as with false teeth in their mouth and lumps of wax in the jaws! "

Among a considerable number of men whom I have questioned upon "the made-up" woman's face, only two have expressed admiration for the practice, and both of these were sexual psychopaths. My mother retained a fresh pink-and-creamy complexion to the age of seventy, and she never used powder or any kind of cosmetic. The constant use of chemical preparations for removing wrinkles usually produces a very fine crop of wrinkles prematurely. Women who have used cosmetics for a number of years often appear much older than their real age. Some of these battered butterflies present a picture of comic-pathetic hideousness.

An actress of singular loveliness, with a much-coveted youthful complexion, was asked how she preserved her charm, and what cosmetic she used. "On the stage," she replied, "I use the grease paint that I am bound to use, but off the stage I use my own special cosmetic, which I keep a secret." Urged by a woman friend to reveal the nature of this magic beauty preserver, she replied: "I use plenty of cold water for my face all the year round."

I will undertake to repair a damaged complexion in three months by the scientific use of *natural* means. I am not referring to the disfigurement of

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smallpox, or some other skin disease, but to the impairment through neglect. The treatment will not only beautify the features; it will improve the general health. The first measure is to expel from the body those poisons that cause dyspeptic signs in the face—redness of the nose, pallor, a yellowy-green tint, pimples, and greasy skin. And here we are again brought back to the subject of constipation. No constipated woman can hope to preserve a fresh, lovely facial bloom. The putrid bowel contents must be expelled, and in neglected cases an enema may be necessary at the outset. Having cleansed the intestines, they must not be allowed to become clogged by future neglect. A teaspoonful of castor oil should be taken daily for four days, on retiring to bed. Every morning two glasses of water should be taken immediately upon rising. During the day drink water freely in addition to other beverages.

The diet must be adapted to the constitution. For example, an anæmic person will require the foods that I have already mentioned, whereas a plethoric subject must avoid the foods and drinks that cause congestion. Meat, if eaten at all, is best stewed. Fish is an excellent meat substitute, and so are dairy products, cheese, butter, milk, and cream.

Fresh fruit and green vegetables must be a large part of the daily diet. In winter, apples, oranges, lemon juice, bananas, and stewed prunes and figs take the place of summer fruits. No white flour should be used in pastry or bread. There must be regularity in meals, and no snacks in between.

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At least two hours of the twenty-four should be spent out of doors, without any heed to the weather. If two hours cannot be devoted daily to open-air exercise, the greater part of the week-end should be spent out of doors. This is of far greater importance than many of the home occupations that keep women out of the fresh air. All rooms, bedrooms especially, must be well ventilated.

Don't put up a sunshade at the first gleam of sunshine, but invite the sun's rays as often as possible, in all temperate climates. Welcome sunburn as a splendid cosmetic! Never mind if the skin peels at a first exposure to a hot sun; a new and better skin will take its place, and that skin will soon become a golden brown. The benefit of moving air and sunlight upon the complexion is tonic and preservative.

Rain is an excellent skin softener and a preventive of wrinkles. The women of Ireland, Scotland, and the West of England whose faces are exposed to rain and mist have lovely complexions. In olden days girls used to bathe their faces in morning dew, a very excellent natural cosmetic.

Free skin action in sweating preserves the complexion, but most women do not perspire enough. Sweating cleanses and softens the skin, and it is a good practice to steam the skin of the face once a week, and afterwards apply a little olive oil. The pores of the sebaceous, or sweat glands must be kept open, and not clogged up with powder. Every morning all the year round the face should be well sponged with *cold* water, and dried with a

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fairly rough towel. A little light friction will tone and beautify the skin. Only good unscented soap should be used.

Acne is a rather vague term for skin disorders affecting the face and scalp. The commonest symptom is "blackheads" on the face, especially on each side of the nose. These deposits can be squeezed out gently after the face has been steamed, and some boric ointment applied. Blackheads are a sign that the face skin is not acting healthily, and that the circulation of the blood is defective. Washing in warm water, followed by cold sponging, will invigorate the skin of the face and prevent acne. It is important that the bowels act freely and regularly.

After these few remarks upon the physical life of woman, it is necessary to examine the relation of the mind to the body, and the psychic factors influencing the postponement of an infirm old age. Emotional affectability is normally stronger in women than in men. Now emotion, or feeling, predominates in human beings over reflection, logic, and reason in most actions of their lives. In women the physical reactions to emotion are more marked than in men.

The hearts of women are often said to rule their brains. There is a physiological foundation for this view. Certain stimuli in the case of men makes no difference to the pulsations of the heart, but in women these stimuli greatly increase them. Blushing is much commoner in the female than the male sex, and Dr. Tilt estimated that two hundred and forty-four

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women out of five hundred are subject to flushes. Women are more readily excited to tears than men. Women are more mobile in the countenance than men, and they more often show signs of emotion in twitching of the facial muscles, tics, and rapid changes of expression. Many women suffer from "nervous bladder," which is an indication of hyperaffectability.

More women than men—three to one—are sufferers from the nervous disease of chorea, or St. Vitus's dance. Nearly all the nervous ailments of women arise from emotional causes. According to Dr. Forbes Winslow, the percentage of recoveries in insanity among women is 38.8, and among men 36.5 per cent. A larger number of women than of men are affected by psychoneurotic derangements, such as hysteria, morbid compulsions, and phobias.

Hysteria is commonly regarded as a disease of females, but it is frequently noted in both sexes. It is a source of much personal unhappiness and domestic trouble, and the disorder is stated to be increasing among civilized women.

Hysteria is a disturbance of the psyche, the emotional being or "soul," and its chief symptom may be said to be a loss of control over the emotions. Doctors of the old school believed that hysteria can be banished by a course of valerian; or they told their patients that they were shamming, and in some cases they flapped them with wet towels, and tried to exorcise the demon by bullying. Modern abnormal psychology has attempted to discover the

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origin of the symptoms before setting about a course of treatment. Sir William Osler pointed out that it is futile to treat hysteria as a physical disorder.

Hysteria, though of mental origin, has an enormous influence upon the body, and often causes physical illness such as hysterical paralysis and skin affections. The neurosis is briefly the result of emotional injury which is not in the consciousness of the patient, but buried deeply in the unconscious, and forgotten. In a word, hysteria is the outcome of a painful repression, which is in most cases the result of a conflict between erotic impulses and moral ideas.

The hysterical woman may be said to remain on the infantile level. She finds life difficult, and is unhappy through the repressed thoughts. The hysteria is an instance of the trouble that may arise through the prohibition of thought. Her natural erotic yearning finds a symbolic satisfaction, and becomes distorted. She is the victim of a system of juvenile education that makes scarcely any provision for protecting the child against the two perils of precocious arousing of sexuality and excessive repression. She is the insane product of an insane upbringing.

Woman's emotionality often brings unhappiness through lack of control over the tendency to irascibility and irritability. Women are more petulant and quarrelsome than men. Their tongues are their weapons, and they are apt to use these weapons recklessly. Nagging women, shrews, and termagants

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have a grievance against life, and are never happy. They age much earlier than women who are capable of self-restraint. Constant explosions of anger have a most injurious result upon the bodily functions, and persons who give way to them show physical signs in their features. Frowns cause wrinkles; smiles prevent them.

The affectability of women can be increased, or modified and lessened, by educational influences; and there are indications that the women of the future will be less exposed to the risks of over-affectability. Healthier physical lives, less undue repression of natural instinct, and a much broader education will tend to diminish the undesirable manifestations of women's sensitiveness.

WHEN is a woman "middle-aged"? A centenarian woman would be at the middle age at fifty, whereas one who died at seventy would be middle-aged at thirty-five. I have said that age must not be reckoned in simple terms of chronology. Ninon de L'Enclos was a young woman at sixty-five, inspired love at seventy, and lived to the age of ninety-one. Physiologically speaking, there are many middle-aged women of forty, while there are others who are in the prime of life at that age.

Women fear old age more than men. The girl of seventeen is apt to imagine that she will feel very old at thirty, and the woman of that age dreads the time when the last traces of her physical charm will vanish. She looks in the mirror with apprehension, and the first grey hair may cause a pang of regret. Women who fear middle age resort to all manner of artificial methods for preserving a young appearance, and these means are often futile, and sometimes injurious.

Low dieting and the constant use of weight-reducing drugs are practised by stout women, and

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many tighten their corsets in a vain effort to conceal their obesity. Hair dyes and restorers are used, and "vanishing creams" for the removal of facial folds and wrinkles. Astringent lotions are prepared by ingenious chemists for repairing the ravage of time. They are mostly ineffectual, and some are pernicious and induce precocious ageing of the skin.

Some ageing women "dress young" with a view to deception, but the device very rarely deceives. Only those who have led healthy lives can look young at fifty. There is also a psychic factor. Those women who concentrate morbidly upon appearing younger than their years, and have no domestic or intellectual interests, generally show marked signs of senescence in their features.

A woman of fifty should feel and look young. The coming of the climacteric, or change of life, does not imply years of invalidism, or a rapid degeneration of physical beauty. There are certain risks at the climacteric, but most of them are avoidable, as I have shown in my book upon "The Critical Age of Woman." Many women are healthier and happier after the age of fifty. They are still capable of experiencing love and romance and of arousing the admiration of the opposite sex.

The cessation of the menstrual function is variable. The first signs may appear at forty-three to forty-five, or much later. Among women in the Western nations the full change has been deferred in some cases to fifty-four, and even to sixty-four. Pregnancy has occurred at the age of fifty-three.

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The normal accompanying symptoms of the change of life are headache, nervous depression, or irritability, skin flushes of heat, or cold shivers, and indigestion. Some women pass through the period with only a minimum of discomfort. Others suffer considerably. Much depends upon the hygiene of the preceding stages of the sexual life. The influence of the mind is of enormous significance. Women who have been told that the climacteric implies a loss of womanhood, a general decay, and the complete cessation of erotic desires and satisfactions, frequently suffer disproportionately. It should be known that the atrophy of the generative system is a very slow process.

Although the reproductive function ceases with the climacteric, the desire for complete conjugal relations, spiritual and physical, is often deepened. A cold woman may awaken fully to passion after the change of life. The natural woman does not bid farewell to love in middle age; but the woman reared in total ignorance of her own physiology and psychology imagines that any manifestation of sex emotion is "unnatural," and must be repressed austere.

The mental conflicts of the menopause are thus complicated, and react upon the body, often inducing the very disorders that are dreaded. Women of a narrow domestic upbringing may imagine that they are abnormal, or sinful and wanton, when they realize that erotic emotion is not completely annihilated by the menopause. A large proportion of cases of infidelity among husbands of middle age,

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of married quarrels and separations of the partners, and unhappiness among wives are traceable to the refusal of many women to continue normal marital relations after the climacteric.

For the normal adult of either sex conjugal intercourse is an important factor of health. Inclination dies a natural death, according to age, constitutional capacity, and the state of sexual health; but so long as desire survives, intercourse within the limits of individual vigour is distinctly advantageous for health of body and mind.

A woman nearing the climacteric period should endeavour to control, as far as possible, the tendency to gloomy forebodings, the sudden outbursts of irritability, and the abnormal emotionality that are likely to complicate the symptoms. Every husband should be sympathetic and patient during this crisis in the life of his wife. Extra tenderness and consideration often mitigate, or prevent, the consequences of a heightened sensitiveness. New interests and recreations may be devised to divert the woman's thought from herself and her symptoms. A second honeymoon at this period may strengthen the bond of affection between a middle-aged couple.

The general hygiene of the climacteric consists of care in diet, proper exercise, due rest, and bathing. The home atmosphere should be made as serene as possible. Too strenuous bodily exertion must be avoided during the period. More fat may be eaten by thin women, and considerably more fruit is an aid to the prevention of obstinate constipation

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at this time of life. A little wine may be taken with advantage. But it must be remembered that a craving for alcohol and drugs is likely to assail women of the neurotic constitution at the change of life.

Warm bathing is often beneficial at this period in lessening the congestions, flushes, and shivers. Douching the vagina may be necessary, as catarrhal discharges often occur. The common complaint of leucorrhœa ("whites") may give much trouble after forty-five, and is often a trial of old age during the decadent process in the genitalia. Unmarried women are more subject than married to this ailment. Constipation aggravates, if it does not cause, leucorrhœa. Asafetida is often used for this affection by women in certain country districts of England.

Daily warm bathing is an aid to relieving the symptoms of this disorder, and douching with a solution of alum or borax is a common remedy. Iron is prescribed, and the requisite amount may be taken in the form of water-cress or spinach eaten daily. Obstinate leucorrhœa requires experienced medical treatment.

PEOPLE of modern civilized states, especially among the urban population, live at a much higher tension than their grandparents of eighty years ago. In spite of improved sanitation and advance in medical science, we have an enormous C₃ population. We have lowered the infant mortality rate, chiefly through the education of the working-class mothers in the care of children; but rickets is one of the commonest infantile diseases, and the cause of much physical disability in later life.

Tuberculosis, syphilis, and alcohol are still the three chief racial poisons in the West. Cancer is increasingly perilous. In some respects the British people are more vigorous than their ancestors; in other respects they are less vigorous. That is the best that can be said. In 1908 about a half per cent. of the whole population were classed as actually mental defectives, and 11,000 of these were maintained by the taxation of the fit in the Provinces alone. Insanity and suicide are increasing, but there is a certain decrease of alcoholism. In 1910 there were 36 per 10,000 of the population certified as lunatics.

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In 1912 the pauper lunatics in London were 5.5 per 1,000 of the total population. It has been stated by nerve specialists that nearly all women of to-day suffer from nervous troubles, and probably the same may be said of the majority of men. This fact supports the view of Dr. Ernest Jones "that we are nearly reaching the limit of natural sublimation."

The saying: "Hard work never killed anyone" has some truth. Freud says truly: "Intellectual effort is rather a protection against neurasthenic illness; the most unremitting of intellectual workers are precisely the people who remain untouched by neurasthenia, and what neurasthenics call 'dangerous overwork' does not as a rule deserve the name of brainwork at all, regarded either qualitatively or quantitatively."

Overwork accompanied by haste, acute excitement, insufficient recreation, and faulty personal hygiene is a source of premature ageing. The majority of persons to-day are not overworked. They are over-worried. Many of the nervous collapses attributed to "overwork" are scarcely associated with work. They are the result of repressed emotions.

A business man came to me and said that he was working too hard, that his affairs were not prospering, and that he was suffering from sleeplessness and depression of spirits as a result of overstrain. I questioned him as to his hours and methods of work, and soon found out that he worked far less arduously than I do, and that he had quite enough money to provide for himself and his family in the future.

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Further interrogation solved the mystery of his insomnia and depression. He was a strongly amative type, married to a frigid woman.

A large number of townspeople work at too high tension in these "hustling" times. The apostles of speeding-up-and-get-on-or-get-out tell us of wonderful time-saving methods in business. One of them wrote, quite seriously, such fatuous rules as this: "Don't wash the lather off your shaving-brush after using it. Leave the lather on, and you will not take so much time in shaving on the following day."

Let us take a representative case of "burning the candle at both ends." A business man rises at eight o'clock, performs his toilet in a hurry, and sits down to a breakfast big enough for a navvy working overtime. He gulps down his food, while he reads his letters, skims through the newspaper, and perhaps one or two trade or financial journals. The blood that should be in the digestive organs is pumped-up to his brain, and the food is not properly digested and assimilated. The day begins with physiological sins. He has not left a reasonable time for eating his meal and catching his train. He is flustered, and hurries to the station, sometimes running. In the train he spends half an hour in contaminated air, through his fear that open windows will cause a chill, and breathes in a number of disease germs, dispersed by his catarrhal companions.

At the office he tries to do three things at once, such as talking through the telephone, dictating a letter to his secretary, and thinking of some matter

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of business that enters his mind. At midday he feels the need of a pick-me-up, and he takes one or two glasses of sherry, or a cocktail. Although he has a heavy dinner in the evening, he thinks it is necessary to eat a substantial midday meal, and he chooses various viands from the menu, without regard to their digestibility, or his real dietetic needs. He imagines that the more he stokes himself with food, the better will his engine work. After luncheon he reflects that another " tonic " will assist him in the strenuous work of the afternoon, and he drinks one or two double whiskies before he hurries back to his desk.

In the badly-ventilated office, he is made more or less irritable by the foul air, the cares of business, and the incessant hustling and trying to do several things at the same time. As a stimulant to the brain, he smokes from twenty-five to forty cigarettes a day, and inhales a large amount of the smoke into bronchial tubes, already inflamed. In the evening he feels jaded, and craves another pick-me-up before his dinner, and during the meal he drinks one or two glasses of whisky, and often one or two more " spots " are taken as a nightcap.

There are, in addition to the wear and tear caused by injudicious feeding, high pressure working, and the goading of tired nerves by narcotics that dull the sense of fatigue, various other fatigue-producing factors which are almost unavoidable in town life. There is, for example, a constant eye-strain in the streets and the office, and the nerves are irritated, consciously or unconsciously, by the roar of street

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traffic and a hundred other noises. It is a sufficiently heavy strain to resist the nervous lassitude produced by these depressing factors, and to add to the number of them is to court physical and mental trouble.

The noise problem is one of the grave menaces to health in the urban life of to-day. There will soon be very few quiet corners of the British Isles. "Had I not witnessed day by day and month by month the almost paralysing effects of intermittent nerve-shattering noise on men who were physically strong, I could not have believed it possible," states Professor H. J. Spooner. The incessant battering of noise on the ear-drums of the town-dweller is a terribly exacting strain for the brain and nervous system. There are millions of people living and working, and attempting to sleep, in the midst of nerve-racking din. Motor traffic has increased noise in town and country. The ordinary motor horn emits hideous eructations, and the time will come when legislation will enforce the use of musical horns.

Locomotive whistles, the shunting of goods' trains day and night, the whirl of aeroplanes, the barking of dogs, the din of machinery, the rattle of traffic in the asphalted or sett-laid streets are sounds to which we imagine the ear becomes accustomed. People living amongst distracting noise become habituated to it, but nevertheless the ears and the nerves are continually assaulted. Broadcasting is another source of nerve-strain for those who live in the suburbs. In some streets there is a literal babel of jazzy tunes

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and stentorian oratory from six in the evening till past midnight.

This frantic speeding-up in work and pleasure is undoubtedly a contributing factor of the widespread nervous disease of the age. The race is not always to the swift. He who goes slow can go far. Hurry and worry are accessory causes of brain-fag, diabetes, heart disorders, dyspepsia, insomnia, nervous collapse, premature senility, and untimely death. It is significant that the overstrained nerves become gradually incapable of rest, and that the overworked brain continues activity in the half-waking state, and often during slumber. That way madness lies. It is not hard work that kills, but the reckless dissipation of nervous energy.

Western civilization is threatened with dissolution through nervous exhaustion. It is entering upon its decline, in the opinion of accredited students of human history. There is an acid induced by fatigue that stimulates certain nerves to a kind of spurious activity. This pace-making modern craze is an epidemic of neurosis. Weary nerves seek, as it were, for more excitement. Hence we find the vices of civilization rampant in all the communities living at high pressure in industrialism and the accumulation of wealth.

ONE of the trials of a vast number of middle-aged men and women is an increase of abdominal girth. There are, of course, a considerable number of persons of both sexes who are rather proud than otherwise of their bulk, and assume a superiority over their lean acquaintances. Some desirable qualities of a psychic character are associated, in the popular view, with corpulence. Men who are fat and sleep o' nights approve entirely of the testimony that the fat are trustworthy, even-tempered folk. Stout persons are said to be always more contented, jolly, and less "nervy" than thin persons.

Is the accumulation of a large amount of fat in the body a pathological state? Fat is a prime essential of a normal diet, and it is required to guard the body against cold, to protect the viscera from concussions, and to produce the curves that enhance physical beauty and attractiveness to the opposite sex. Some animals can live for considerable periods on their own stored-up fat, as in the case of bears, badgers, squirrels, and probably salmon. In times of famine fat people survive longer than lean.

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Undue adiposity, or obesity, is a disease. It is due to an inherited tendency in some cases, to injudicious feeding, and to insufficient exercise. Nearly all the investigators of the causes of corpulence in middle age have overlooked the fact that, with the decline of the sexual functions in both men and women, there is frequently an increase of adipose matter. This increase is, I believe, largely the result of a heightened zest for the pleasures of the table, conjoined with a waning inclination for muscular exertion at the climacteric period in men and women.

At fifty or thereabouts some men confess that gastronomic enjoyment has become the substitute for erotic gratification. Middle age is for very many persons the "gorge and guzzle" period of life. No doubt the woman of middle age, who becomes more preoccupied than before with the enjoyment of eating, will deny vigorously that she is growing fonder of eating, and she will also scorn the view that this can have "anything to do with sex."

Nevertheless, Nature has contrived that the desire for sensual pleasure shall be appeased at every stage of life. The infant finds its sole gratification at the mother's breast, or the feeding bottle. Many an old man returns to the oral gratification provided by a bottle of a different kind. At seventeen a girl may appear almost indifferent to the pleasure of eating. The same girl at the age of fifty may become a fat epicure of the table. It is notable that corpulence

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at any age from puberty diminishes sex activity. The fat are frequently cold sexually.

Pleasure being a prime essential of living, there is the provision of one pleasure for another in the biological scheme of things. Therefore, the decline of interest and capacity in respect of the sex impulse is very frequently supplemented by a marked increase of relish for pleasing dishes. We do not see lads of twenty scanning the menu with the perfervid expectation of the plump man of fifty. Nor shall we note a large proportion of young girls among the women in wine bars and public houses.

Appetite for food is artificially stimulated by a large number of middle-aged persons of both sexes by aperitives and tempting viands. Eating is often their chief hobby. They are continually ingesting some kind or another of food and drink. At 9 a.m. there is a hearty English breakfast, thought by some to be one of the secrets of Britain's supremacy. At 11.30, a glass of sherry, and cake and biscuits, and at midday an ample four-course luncheon, followed by coffee and liqueurs. During the afternoon, some of these alimentative enthusiasts eat chocolate or toffee. At 5 p.m. there is afternoon tea, with cream, pastries, cakes, and other fat-forming delicacies. At 8 p.m., a seven-course dinner, with wine or ale, followed again by coffee and liqueurs. During the evening, while engaged in the strenuous exercise of bridge or tittle-tattle, some of these athletes in eating, drink cocktails, or port; and I have seen a woman of seventeen stones in weight bring a perfect

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day to its close with biscuits and milk. And such persons say : " I wonder why I am getting so fat ? "

Obesity interferes with sound health, affects the respiratory organs, discourages exercise, overtaxes the heart, influences digestion and assimilation, causes constipation, and induces boils and other skin troubles, and mars the beauty and symmetry of the body. Fat in man or woman has been rather cruelly described as " a greasy witness of contentment with life." The emotional placidity of the corpulent is often a species of coma or stupor induced by repletion. We must, however, not forget that many fat persons are remarkably good-natured and cheerful.

It is scarcely true to say, as some hygienists do, that everyone can avoid becoming too stout. Some people have a physiological trend towards corpulence, and it is not easy to prescribe a successful regimen in such cases. You may diet these persons, and recommend Turkish baths, profuse sweating and vigorous exercise; but the result is almost negligible in certain instances. It seems a question of stubborn fate.

But an enormous proportion of fat people can become normal in weight, corresponding to age and height, through sensible feeding, general hygiene, and plenty of active exercise. We do not see many fat men amongst the rank and file of the British army, or in the navy. Exercise and simple rations are the preventives. Weight can be reduced by stones through the drastic wasting methods of

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jockeys. Living on sixpence a day, and earning it by bodily toil would prove a complete cure in many cases of excessive corpulence.

William Banting reduced his weight from 202 lb. to 156 lb. by abstaining from bread, milk, butter, sugar, beer and other fattening foods, and eating lean meat and vegetables. As alcohol retards the absorption of fat, Banting's recommendation to drink gin and whisky was sound. In some respects the Banting system was sensible enough. The chief principle was to avoid the fat-producing foods, a measure that ordinary common sense would suggest.

The weight of a human being of adult age should remain almost stable. Many persons do not vary from decade to decade in body-weight. Any notable variation demands inquiring into the cause. Ordinary obesity can be cured, but only by strict adherence to regimen. A well-known actor said to me: "I want to reduce my fat, but I don't want to cut out the food that I like best!" I can only say that there must be a determination to avoid fat foods, or to use them with extreme moderation, if a cure is really desired.

Butter, lard, suet, margarine, and oil should be struck out of the dietary, but the fat of meat may be eaten in small quantities with the lean. White cereals, flour, rice, and maize preparations must not be eaten. Toast is more fattening than plain bread, though the contrary is an accepted fallacy. Very few potatoes, if any, should be eaten, but raw green vegetables are permissible. A little game and fish

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will vary the menu, and as much fruit as desired may be taken. Fluids must be reduced, with the exception of water. Beer, stout, port, Burgundy are inadmissible, but dry sherry, light wine, and claret may be drunk in very small quantities.

Exercise is of supreme importance. After their schooldays, many men give up outdoor games and sports with the result that, at forty, they are unable to burn up the food fuel, and their flabby muscles are encased with fatty tissue. A protuberant abdomen is unhealthy and unæsthetic. The disfigurement can be removed in the great majority of cases by vigorous exercise. Boxing, fencing, swimming, tennis, rowing, walking, golf, cycling and gardening provide means of exercise suited to various tastes. Brisk walking should be practised at all times by stout people. The weekly use of a home Turkish bath for half an hour will aid in the reduction of fat, and exercise should be designed to permit activity of the sweat glands.

As the bulk of adipose tissue accumulates below the belt, the abdomen must be exercised. Gentle pummelling of the abdomen every morning, skin friction, and massage are very useful. More results are often noted from constant exercise than from dieting alone. In a word, the best remedy for corpulence is active bodily exercise that induces sweating, and a drastic reduction of carbohydrate and fat foods. It is most important that the bowels shall act freely.

Unhealthy leanness is often the consequence

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of malnutrition. Many persons, through poverty or ignorance, try to subsist upon a starvation diet, composed chiefly of white bread and margarine and tea. There is a vitamin-containing margarine on the market that is equal in food value to butter. Wholemeal bread, herrings, sprats, mackerel, eels and salmon should be eaten by thin people instead of white lean fish such as whiting and plaice. Eggs, milk, and cheese should form a considerable part of the diet. Potatoes tend to fatten. Green vegetables must be eaten for the vitamins contained in them. Sugar and the starch foods are valuable. Oatmeal porridge, with cream and brown sugar, should be eaten at breakfast, followed by a herring, or an egg. Cocoa made with milk may be recommended. Stout, beer, and port may be drunk, but not cider or acid white wines.

Vinegar and acid fruits, except apples and oranges, should be banned. The morning cup of tea in bed often interferes with an appetite for breakfast. After the two principal meals of the day rest should be taken for fifteen minutes, in a recumbent position if possible. Exercise must not be neglected. It is a fallacy that almost complete inactivity of the muscular system will increase weight. A thin body can be made more bulky by judicious exercise, and an inactivity of the muscles reacts upon the digestive and excretory functions.

Thinness is often induced by indigestion and constipation. Regular bowel evacuation is imperative, but aperient drugs should not be used, except as a

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desperate remedy. It must be repeated that the natural laxatives are fruit, green plants, roots, vegetable oils, and plenty of water.

Lean persons should eat slowly and masticate every mouthful carefully. They should avoid snacks between meals, and eat three times a day. Strange as it may seem, overeating is a not uncommon cause of thinness. If the intake of food is constantly in excess of the output of energy, and the stomach and bowels overtaxed, the result is derangement of the assimilative function. Dr. Karl Abraham tells of a rich banker who told his children to restrain the desire to defecate for several days, so that every morsel that they ate might be saved. Such ridiculous notions are quite common in all classes. Keep the intestinal canal clean, and you will assist the digestive processes essential for body-building and repair.

People inclined to undue thinness should have long hours of sleep at night, but should not get into a habit of lounging and lolling. They should add to their muscle weight by exercise, avoiding always extreme exhaustion. Nervously-constituted thin persons, disposed to irritability and depression, must try to cultivate control. There is sound sense in the advice: "Laugh and grow fat." A weariness of the mind may cause serious loss of flesh.

WHEN plants and animals have lost the reproductive capacity, Nature has no further use for them, and they soon perish. Some insects live only for a few hours. They mate and die. It is probable that among primitive human beings in the earliest days of man's evolution, the reproductive power ceased at fifty. It has been prolonged by mankind, and there are men of eighty who retain the procreative ability. According to the natural scheme in regard to all other animals, human beings should die when reproductivity ceases. The life of man is, however, continued long after the cessation of sexual vigour. The span may reach a hundred years, or much longer. Metchnikoff, in "The Prolongation of Life," describes a woman centenarian, whom he visited at the age of 107. This remarkable veteran, Madame Robinson, had no hardening of the arteries, and the lungs and other organs were sound. She had retained intelligence fully, and seemed to find pleasure in life.

Ireland has produced many centenarians. Lady Eccleston died at 143; Collier was 137, Shiel 136,

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Colonel Winslow 146, Creeke, of Thurlow, 125, William Beeby, Dungarvan, 130. A long list of centenarians will be found in Haydn's "Dictionary of Dates."

The cause of extreme longevity is obscure. Heredity is a factor, and so are climate and environment. It is remarkable that some very aged people, including centenarians, have not been notably hygienic in their habits. Metchnikoff remarks: "Quite a number of centenarians have drunk freely." Cornaro lived to an advanced age on a diet of twelve ounces of food and fourteen ounces of wine daily.

There is a theory that a right balance of all the endocrine or ductless glands alone contribute chiefly to the chance of long life. But we have not yet discovered how to secure that balance. It is probable that cooked foods are injurious to the internal secretions. There may be insufficient iodine in the diet, and the thyroid, the gland of energy, may not function healthily. As I have said, there are in the generative organs other elements than the gonads or sex cells. The interstitial glands of the testicles, and the ovarian glands of women very probably influence longevity and a hale old age. Sexual vigour is not necessarily an accompaniment of physical strength, but active interstitial and ovarian secretion seems to favour the retention of general vigour in the fifth and sixth decades of life. The secretions undoubtedly continue after the gonads cease to form in the genital organs, and the vasectomy

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operation stimulates them enormously in middle-aged persons.

Is the prolongation of life always desirable? This question requires consideration. If the octogenarian is contented, and wishes to protract his existence for ten or twenty years, most of us would say that he has a right to live as long as he likes. But it is a debatable question whether some old lives are worth living. Some aged and stricken men and women do not wish to prolong their lives. Some lives are useless to the community. An old diseased toper is generally a curse to his family.

On the other hand, some lives are well worth prolonging after the age of eighty. Many more men and women in the late senescent stage of life would be useful to society if they had lived rationally. A large number of old people are exacting and selfish in family life, and it is a secret relief to their relatives when they die.

“ Our nature here is not unlike our wine;
Some sorts, when old, continue brisk and fine.”

“ The old are more beautiful than the young,” writes Walt Whitman. But this depends on the personality and the degree of vitality that remain. Some old human ruins may be described as picturesque; others are repulsive. A man of seventy-four came to Dr. W. J. Robinson, of the Bronx Hospital, for advice on waning power. He was wrinkled and jaundiced, and had dyed hair, and was suffering from a venereal disease. This “ typical

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human wreck " wished to live simply for the gratification of sensuality. Are such types worth saving?

There are beautiful and healthy old men and women who are unquestionably worthy of life. There are kindly, wise senescents who inspire admiration and love. These are the types that merit the tender care so often given to them by members of their family. They are able to diffuse happiness in the home circle.

It is not altogether improbable that in the future aged and very infirm persons, who crave death as a release from incurable suffering, will be permitted to step into a lethal chamber and take a last slumber. There is not a living doctor of wide experience who has not reflected, when confronted with a case of the impending inevitable death of a tortured patient, that the most humane course would be the extinction of life. Many hopelessly stricken people have, in throes of agony, begged their nurses or relatives to give them a fatal potion.

Primitive communities have a short way with their infirm members. Aged, feeble persons among the Eastern Inuits are asked if they have had enough of life, and it is strict etiquette for the old folk to answer in the affirmative. Elie Reclus says that an oval pit is dug and filled with moss. "On the headstone a reindeer is slaughtered, its blood flowing in torrents over the moss. The old man stretches himself upon this warm, red, dewy couch." He is asked if he is ready, and he is bound to poles, and after his nostrils have been stopped with a soporific

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substance, or anæsthetic, his carotid artery is opened and he bleeds to death.

Is this cruelty? The civilized man will answer yes. With culture comes a development of the emotion of sympathy and solicitude for the ailing, the old, and the helpless young. We go to the farthest extreme. We use every endeavour to keep alive the hopelessly ill and decrepit who wish to die. And we take no measures to prevent the physically and mentally diseased and degenerate from breeding as freely as they will. Our social hygiene and morality are still somewhat crude.

Most people die too soon through the attacks of disease micro-organisms, and only a minority die of old age alone. After sixty the power of resistance to the toxins that ravage the body becomes feebler, and the deadly purins, mostly the result of a generous meat diet, are increased. Constipation is far more injurious in the aged than in the young, and old persons are prone to this disorder.

Professor Leonard Hill assures us that, in the future, we shall refuse to accept the ridiculous statement that a man is too old for work at sixty. Sir William Osler fixed the period of decline at forty, and scared a vast number of people. It is probable that, with the development of the science of hygiene, men and women of sixty will not be classed among the bodily and mentally degenerate, but as youthful middle-aged folk, with years of activity before them.

The care of the aged has received less scientific attention than the care of the young. Roughly considered, the protection of the late senescent is a question of "keeping up the strength." But the methods used are frequently debilitating, and some old persons are killed by coddling. One notable error is over-feeding. An aged man or woman is

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naturally less active than those in the prime of life, and the waste of tissue is much smaller. The growing child requires as much food daily as the man engaged in light work, because it is not only making flesh and bone, but expending much energy in play. The aged man cannot digest and assimilate the diet of early manhood.

An almost surprisingly small quantity of food is eaten by some healthy old people. But general rules as to quantity must not be too rigid. Again, we have to consider idiosyncrasy. Nervously-constituted aged persons tend to eat too little of the foods that they require. Phlegmatic persons, who have been hearty feeders all their lives, often imagine that they need a liberal diet in old age, and overload the system with protein.

Too much nourishment is dangerous for ageing persons. Cornaro said rightly : " It cannot be urged too often that when the natural heat begins to decay, 'tis necessary for the preservation of health to abate the quantity of what one eats and drinks every day ; Nature requiring but very little for the support of the life of man, especially that of an old man."

The old will not go far wrong in diet if they eat moderately, eggs, fish, poultry, butter, and milk as sources of animal protein and fat. As muscular exercise is usually greatly lessened in the last decade of life, much carbohydrate food is not requisite. Milk puddings, wholemeal bread, potatoes, and root vegetables contain enough starch for the aged. Cheese is very nearly a perfect food, but it is not

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very readily digested, and must be eaten sparingly by septuagenarians. Only a little pulse food should be taken. Pastry and cakes are not suitable for aged digestive organs.

Fruit and raw green vegetables are essential as a regular part of the daily diet. The old may eat raw apples and oranges with the assurance that they are not indigestible, if properly chewed. Abundant fluid should be taken, chiefly water; but for those accustomed to alcohol, a daily glass of ale, or a half-bottle of light wine, will add zest to meals. The best nightcap for the old is a glass of unheated, or just warmed, milk, to which a teaspoonful of brandy may be added, if desired.

Aged people require phosphorus, and this is contained in egg yolk and milk, and in lesser proportion in potatoes, carrots, and turnips. It is not, as is commonly believed, abundant in fish. Phosphorus is essential for repair of nervous wastage in old age, and old persons often benefit by taking it according to medical prescription.

The bodily warmth of the old must be preserved by suitable feeding and protective clothing, and also by exercise adapted to capacity. It is a common fallacy that alcohol heightens bodily heat. Its action is exactly the opposite. Many aged people expose themselves to pneumonia by taking spirits before going out in cold weather. Fat is a sure source of heat, and a glass of milk yields warmth, whereas a half-bottle of port diminishes temperature. For that reason the old should take alcoholic drinks

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when retiring for the night, and not when going from the house to the chilling air of the streets. Arctic travellers know by experience that alcohol is likely to prove fatal in a low temperature of the air.

In winter the old must wear warm woollen clothing of a light weight, and not muffle themselves too closely in heavy garments, unless travelling in motor-cars. They should never go to bed with cold feet, and from the end of autumn till May, they will be well advised to have a hot-water bottle in the bed, if the circulation is sluggish. Stuffiness in rooms must be avoided, and sunlight should be admitted whenever possible.

There are phenomenal septuagenarians who take out a new lease of life at the age when most men and women show the stigmata of senility. Goethe was a prodigy of this type. At seventy-four he fell in love, and some of his work was produced after that age. Before forty he had a gloomy view of life, but later he became an optimist. He was untroubled by indigestion, or we may suppose so, for at eighty-four he ate an enormous quantity of goose, and drank a bottle of red wine at a meal.

The old must guard against boredom, a state which, as Stendhal said, "robs a man of everything, even the courage to kill himself." Aged people with few mental resources, who are debarred from the sports of their youth, often suffer from tedium of living. I have already emphasized the importance of maintaining a healthy interest in pursuits apart from a business or profession. The effect of

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boredom on the bodily functions in senescence is well known to physicians, who recommend frequent change of scene for the aged bored.

The tonic influence of the society of the young is invaluable in the late evening of life. Wise old men and women will endeavour to form genuine friendships with youths and maidens, and be willing to learn from them. Many minatory, hypercritical, arrogant old persons estrange the young members of their family, and then complain that they are neglected and unwanted. No young man can affect for long an interest in an aged man's physical symptoms, or his grievance with life. Grandfathers and grandmothers should combat senile egotism.

There is some sound advice upon this matter in *The Rambler*, of 1750 :

“ Another vice of age, by which the rising generation may be alienated from it, is severity and censoriousness, that gives no allowance to the failings of early life, that expects artfulness from childhood, and constancy from youth, that is peremptory in every command, and inexorable to every failure. There are many who live only to hinder happiness, and whose descendants can only tell of long life, that produces suspicion, malignity, peevishness, and persecution, and yet even these tyrants can talk of the ingratitude of the age, curse their heirs for impatience, and wonder that young men cannot take pleasure in their father's company.

“ He who would pass the latter part of life with

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honour and decency must, when he is young, consider that he shall one day be old, and remember when he is old that he has once been young. In youth he must lay up knowledge for his support, when his powers of acting shall forsake him; and in age forbear to animadvert with rigour on faults which experience only can correct."

The old must guard against the stubborn conservatism that is often a characteristic of the senescent brain. There is no reason why the ageing mind should cease to learn. Mr. R. J. Mackay, an industrial psychologist, speaking at the British Association Conference, 1928, uttered some pungent sarcasms upon "the fixations of mental outlook" among "the so-called captains of industry." "British industry," he remarked, "has been said to be suffering from a surfeit of so-called captains of industry, many of whom in the Army might be risky selections as corporals. Many were old men who were unaffected by the war except in regard to the surprising ease with which they were able to make their profits, and whose fixations of mental outlook are dated with years of grace which look more impressive when seen on bottles of vintage port."

The happiness of the octogenarian depends greatly upon his usefulness as a member of the community. He must realize that the world is to the young, and that the counsels of age are not necessarily the counsels of wisdom. The old man who acts as a dead weight on the advancement of knowledge, through an obstinate esteem for the past, and for

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his own opinions, is anti-social and useless as a monitor.

The preservation of mental vigour on the last stage of life conduces to physical well-being and contentment of mind; but the retention of this vigour is only possible when the brain has been exercised constantly from childhood. Many people of seventy die from rust, not from wear. The sensitive plates of the brain are toughened through neglect; the faculties are dulled by intellectual inertia. They die through a lack of interest in life.

The wheels of the human machine run down gradually in the natural course of decline. Their rust and creakiness can be retarded by oiling. If a man says: "I am too old to learn," he has never possessed the capacity for learning.

Growing old gracefully is an art. "Few people know how to be old," said La Rochefoucauld. "The lean and slippered pantaloons" is frequently "a tedious old fool," a domestic tyrant, a self-opinionated wind-bag, or a helpless half-wit. Old women often become voluntary invalids, and impose terrible burdens on their children and dependents. They exaggerate their weakness and disability, and demand continual service.

A bed-ridden elderly woman, who had been attended for years by a devoted daughter, professed that she was unable to walk. Her supposed vague "incurable" disease was hysteria. She was a house-proud woman by nature, but her daughter was compelled to nurse her, and to attend to all domestic

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duties. But the daughter married, after a protracted engagement; and two days after the wedding the hopelessly disabled parent left her bed, and resumed full charge of the household management. She is still alive and active. The case is typical.

Parents who have produced a large family generally expect the deference and solicitous care of their children in old age. There is no great merit in fecundity. All the lowest types of animals and insects are very prolific. The irresponsible parents of an unhappy brood of consumptives, or mental defectives, are often very proud of their reproductive activity; instead of feeling ashamed that they have dowered a number of persons with disease, they demand admiration and respect of these unfortunates.

The duty of children to parents is a topic that lends itself to the facile cant that often passes for morality. Cruel parents, wastrel parents, and the incurably diseased progenitors of cripples and lunatics are not worthy of the "honour" of their children, nor the approbation of the State. They merit the censure of both. The deliberate procreation of children by physically and mentally sound parents is a very exceptional motive for sexual intercourse. It is characteristic of the conventional camouflaging of everything appertaining to the shunned subject of sex, that we speak of the erotic impulse as "the reproductive instinct."

"Most children," writes Dr. Norman Haire, in "Hymen," "are procreated quite accidentally, as a by-product of a sexual congress, the real aim of

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which is the sexual gratification of the parents. Indeed, a great many are born *against* the wishes of their parents, through the failure of contraceptives and abortifacients."

Nevertheless, the average grandparents boast of their numerous descendants, and demand as a filial duty their care and respect in old age. "But surely," some readers will interpose, "you hold that parents are worthy of respect and affection?" To this question there are two answers: "Yes and No." Reproduction *per se* is not a virtue. It is a social service if the children have a fair chance of health, happiness, and potential qualities of civic usefulness. Giving birth to a child is not essentially a benevolent or philanthropic act. The child may live to reproach the authors of his or her being for their action.

Someone has remarked that "it is better to have been a nimble herring in the sounding main for one hour, than never to have been born at all." I do not propose to examine this statement. We cannot interrogate the herrings. Human life may be a boon, or otherwise. Everything depends upon the individual conditions and circumstance. With perfect sincerity, one man will bless the womb that bore him, and rejoice that he lives, while another will question whether *all* human lives are to be regarded as eminently worth living. The fervent desire for "a better world," "a home," "a happier sphere," "perfect rest," and "a mansion in the skies," constantly expressed by an enormous number of people, seems to prove that the only life that we know

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from experience is, to say the best, not quite so satisfactory as we wish it to be.

According to the natural dispensation, all parents, good or bad, are loved by the very young child. The infant will nestle as closely in the bosom of a morally bad mother as he will in the bosom of a saint. The child of two will regard the father as a strong protector, an object of mingled love and fear. But the probability of an abiding affection for the parents, which may be reinforced at middle age, is a matter of conjecture during childhood. Many carefully-nurtured children fail in affection for their parents. Fear alternates with love in the attitude of the child to the parent. Even the tender, protective care of the mother may arouse hostility in the growing boy or girl, and the authority of the father may, without justification, be regarded as a gross interference with liberty.

In adolescence there may be estrangement between parents and children, through the natural tendency of the young at this period to resist domination. The "fond" mother may become a veritable tyrant, as Anatole France testified from his own experience of a deep maternal love. There are a hundred causes of disaffection in the relations of parent and child, and for some of them the parents are responsible.

Why do the aged expect their children to revere and love them, *as a duty*? This patriarchal idea of the reverence due to our progenitors may be waning, but it still stands in the way of friendship between

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parents and children. Our parents are not always our benefactors, but we are taught that they deserve constant gratitude. "This is why so many children are apparently cruelly neglectful of their parents who are growing old. They have grown tired of hearing of their debt to the old folks," writes Mrs. Leonora Eyles; "if the debt had never been mentioned, it would have been paid willingly; we all hate being compelled to do anything, or being continually told it is our duty to do anything."

I am discussing the relations of the old to the young at some length, because I am convinced that youthfulness in the evening of life is dependent upon a happy environment, especially in the domestic circle, and that this happiness will be missed by the aged who are segregated from the young. It is a common complaint of old people that the younger members of their family rarely visit them, or show any concern for their well-being. These ill-used elders have usually only themselves to blame. They are unattractive to the young, often repellent, through their obvious demands for gratitude, and "the respect due to age."

Age of itself merits no respect. The wicked often flourish and live long on the earth. Respect is only due to the good parents and citizens, the makers of "a happy fireside clime" and those who recognize social responsibility.

The virtuous old are happy if their passions are sublimated in the social sense. The ruined, decrepit old man who regrets the loss of a capacity to indulge

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in the sensual pleasures that have been the dominating aim of his past life, and the wrinkled, hairless and toothless coquette, whose sole interest was attracting lovers, spend the evening of their days in discontent and unhappiness. The dependence of happiness upon a virtuous life has been discussed by moral philosophers for centuries. But there is no satisfactory definition of "virtue." If we accept piety as the true test of virtue, we shall find that many pious persons have been unhappy in old age.

A passionate devotion to social amelioration, to knowledge, or to art is a means of happiness for a proportion of the aged, but the proportion is small. The desire for gratification of the bodily appetites is infinitely stronger in the mass of people than the thirst for knowledge. Hence the aged sensualists, who have never cultivated the higher social instincts, or experienced a passionate intellectual curiosity, are without two of the chief consolations of senescence. The self-centred, mentally inert septuagenarian may sink into a senile stupor, or he may become a querulous malcontent, and a torment to his family. Such old folk are a burden upon society and their relatives. They are hated by the younger generation, and their decease is considered a blessing.

The weakly veteran should realize that the world is to the young, and that he has no right to sacrifice or hinder the strong. Old and feeble as he may be, he must strive to help himself as much as possible, and not regress into infantile helplessness and dependence on the care of others.

ABOUT fifty per cent. of the inhabitants of Great Britain, notably among the town populations, wear a harassed look habitually. The world is too much with them; getting and spending they waste their power. Most of them toil, not for winning leisure, but for possessions. Their ideal of happiness is to own a number of things. This passion for owning pieces of the land, and luxurious houses stuffed with upholstery, of making a better show of prosperity than one's neighbours, is often appeased only by the sacrifice of health, and therefore of the chief source of enjoyment of life. Sir Arthur Keith said recently: "Our standard of life is no longer our acreage, but our brain capacity and our science." I am afraid that Sir Arthur is too optimistic. The vast majority of Western people would far rather *own* than *know*. The masses are hostile to knowledge; they hold it in contempt as a fad of "high-brows." The leisure that so many crave is not desired for cultural ends, but for inactivity of mind and body and sensual indulgence.

"When I think of the benefactors of the race,"

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says Thoreau, "whom we have apotheosized as messengers from heaven, bearers of divine gifts to man, I do not see in my mind any retinue at their heels, any car-load of fashionable furniture."

The enthusiasts of "the simple life" are often as irrational as its derisive opponents. Living simply can be practised in other ways than by wearing sandals, eating beans as a staple food, and dwelling in a wooden shanty or an old railway coach on an Essex marsh. Simple living does not imply a sacrifice of refinements and even of luxuries. It means making the most of life and getting all possible pleasure from it, without breaking one's back and starving the soul.

"But *my* pleasure," says a small tradesman, "is to own a motor-car." Very well, everyone to his taste. Your daughter wanted to own an expensive fur coat, and you scraped and pinched to give it to her, because she told you that the possession of that coat would represent the topmost summit of happiness. But now that she owns the coat, she yearns for a new hat, suitable to wear with it. And so it goes on. The man who owns ten acres envies the neighbour who has fifty. He thinks he will be perfectly content when he can afford to buy forty more acres.

I maintain that the man who can walk down a street, and look in the shop windows, and says: "I am quite content without any of those luxuries," may be quite as useful in a community as his neighbour, who is adding continually to his material possessions. By

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inhibiting the acquisitive passion, we add to our wealth of leisure, the best asset for a man of active mind. If I owned the whole of Exmoor, I might be so worried about the rents due to me, the repairs, the super-tax, and so forth, that walking on the moor would give me no pleasure. The number of things one can enjoy rapturously without owning them is truly enormous.

There are other ways of simplicity in living than "pigging it in a three-roomed country cottage"—the common gibe of would-be stylish women who think that simple living must be inseparable from squalor and dirt. Simple living is just having time to live healthily. "Let not to get a living be thy trade, but thy sport. Enjoy the land, but own it not. Through want of enterprise and faith men are where they are, buying and selling, and spending their lives like serfs." Such was the philosophy of Thoreau.

Muralt, a Swiss visitor to our country, said in his "*Lettres sur les Anglais*": "They are a good-natured people, very rich, so well-nourished that sometimes they die of obesity." Some die also in this country from fatty degeneration of the brain, induced by long-continued application to one pursuit—money.

For the thoughtful beholder there is something terrible in the sight of the hustlers of all classes and ages arriving at a London station by a morning train. Why do these people rush and push furiously? Why have they strained, harassed,

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distressed faces? They are the involuntary martyrs of a civilization that places commercial progress at the head of the list of civilizing factors. Some who have made money are still urged on by social ambition, the desire for ostentation and exhibitionism. The huge majority are forced into the scramble. It is a case of be a slave or starve.

The possessive passion is natural, and it only become ruinous when it is exaggerated. Let those who will own things in abundance; but the great possessors should realize that they are merely collectors, and not of higher value in society than a poor scholar in a bare garret. Bertrand Russell says wisely: "It is preoccupation with possession, more than anything else, that prevents men from living freely and nobly."

And without health no one can live "freely and nobly." The cardiac, nervous and renal diseases of our time are part of the price that must be paid for the satisfaction of the money-getting passion. Thousands of business men are on the point of nervous collapse year in year out, and a mass of the toiling population have no time for health culture. The state that we describe as "civilization" does not diminish, but tends to increase, our physical and mental suffering. Can a fifty per cent. rise in the suicide rate in France, and an appalling increase in England, point to anything else than a widespread weariness and hopelessness?

Even our pleasures in these hurried days are a form of hustling. After the day's business tension,

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we seek so-called recreations, such as driving a motor-car in traffic-congested streets, at the highest permissible or prohibited speed. We rush from the office to the restaurant, rush to the theatre, scramble to get a seat in the last train to the suburb in which we live, and think that this sort of frantic haste is recreative. We do not know how to work or how to play healthily. A constant round of pleasure may be as fatiguing and depressing as hard, exacting work. In the midst of pleasures a man may be unhappy. As Macdougall states, unhappiness and pleasure are "not absolutely incompatible and mutually exclusive."

Simplification of life would release many men from constant drudgery, and many women from domestic slavery. Our houses dominate us. "To simplify is often to beautify. To rid modern life of its knick-knacks is to make room for those things which are unnecessary and beautiful," wrote Mrs. Havelock Ellis. Most housewives in the working and lower middle classes are in a state of chronic fatigue, through overwork in the home; and in many instances the mother works at a trade and keeps the house. Many women are worn out at fifty.

Anxiety, over-fatigue, nervous disease and premature ageing would be lessened considerably, if we were less preoccupied with the material comforts and luxuries, which can only be obtained by continued overstrain and the neglect of health.

I HAVE referred in the chapter on "Marriage and the Aged" to the influence of sex upon mental and physical health. There are other aspects of this question which need careful consideration, because the majority of persons are even less instructed in sexual hygiene than in the general principles of health. Much illness, unhappiness, and anxious perplexity can be traced to the widespread ignorance of sex matters. Instinct fails completely as a reliable guide to sexual health and conduct. The mass of civilized people have need of instruction in the art of love and the science of reproduction.

There is no antagonism between romantic, spiritualized love and sexual science. The true lover is the man or woman who realizes that the roots of the exquisite flower of love are in the physical being, and that understanding of the inter-relation of body and spirit in married union safeguards the bloom of love.

Professors Geddes and Thomson, in a little book on "Sex," have said "that when the steps of the evolution of love are faced and climbed, the poetic

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and spiritual possibilities are found to be more assured than ever, since they appear henceforth, not merely as the dreams of the poet, but as the promise of the race."

It is needless to state that sexual union in all animals is the chief aim of Nature, and that continuous celibacy is unnatural. It follows, therefore, that expression of the erotic impulse is normal and necessary, and that suppression is contrary to natural law. It has been denied by some writers that absolute continence exists. Complete abstention from sex satisfaction of any kind whatsoever would be positive continence. It is well known, however, that there are many forms of vicarious gratification of the erotic instinct. Among them are the auto-erotic substitutes, such as masturbatory practices, and the spontaneous discharge of tension in sleep. There are also various perverse means of obtaining satisfaction.

This proves that the sex longing tends to be a dominating influence in the lives of normal people, and that long deprivation is often fraught with peril to psychic and physical health. It should be understood that a relative continence is essential. A reckless indulgence in the first years of marriage is often followed by impotence and nervous symptoms in later life, and the signs may appear at forty, when the excess has been considerable.

Sexual abstinence may have little results or none in the case of innately feebly-sexed men and women. On the other hand, nervously constituted persons, hyper-orchidiacs, and women with a vigorous ovarian and

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thyroid secretion, may suffer in mind and body through lack of healthy satisfaction. The moral struggle for celibate chastity in these types is often very severe, and may lead to neurotic symptoms. Hence there is an incessant conflict between physiological desire and psychic repression, and this conflict is incompatible with sound health. The struggle for continence may use the greater part of the mental and nervous energy, and produce neurasthenic symptoms, acute depression of spirits, and bodily malaise. It is a handicap in the fight for subsistence and a source of inefficiency in work.

Brown-Séquard held that erotic excitement is an aid to severe mental and physical toil. Bloch states that men of strong sexual feeling have said that they have been able to increase their output of mental work when abstinent from intercourse. This would seem to contradict the view and experience of Brown-Séquard. But regard must be given to the enormous variation in constitution, sexual vigour, and the mental attitude. I know intellectual men who use their brains incessantly, but are, at the same time, extremely potent; and they testify that abstinence induces dullness, lassitude, and irritability.

"Most of us," writes Dr. Ord (*British Medical Journal*, August 2nd, 1884), "have no doubt been consulted by men, chaste in act, who are tormented by sexual excitement." Various symptoms resulting from deprivation of intercourse are described by Ord, and such symptoms undoubtedly interfere with work. Freud remarks: "I have not obtained the impression

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that sexual abstinence is helpful to energetic and independent men of action or original thinkers, to courageous liberators or reformers." The professor does not believe "that there is any opposition between intellectual work and sexual activity such as was supposed by Möbius."

The statement of a certain number of doctors that *complete* abstinence does no harm whatever is countered by a contrary view among other medical inquirers. We shall find that truth lies between the two extremes. Sexual abstinence is entirely harmless in the case of a few abnormal persons of either sex, who are without sex feeling or capacity. Abstinence is not a penance for a very large number of young women who are by education inhibited from all thought upon sex, and are without experience of love. Continence may have no harmful psychic effect upon an enthusiastic mystic who has successfully sublimated the sex impulse to the point of extinction.

It may be asked: "When is abstinence healthy?" Periods of abstention are decidedly beneficial in some instances. Probably most medical authorities teach that complete continence is necessary during the years of bodily growth, and that a young man should not marry under the age of twenty-four, and a girl before she is at least twenty-one. Undoubtedly, the battle for chastity is a very hard trial for the bulk of adolescents. From the moral standpoint, we can only counsel pre-marital continence among the young. The question is by no means settled by reiterating the falsehood that "chastity is perfectly easy for a healthy-minded

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young man." Such statements do not aid the young in one of the severest of moral conflicts. They only arouse contempt for the counsels of age.

We have but one standard of sexual life, and all are admonished to obey it, regardless of the variation of temperament and constitution. But we are not concerned at present with the ethical and social aspects of the problem of sexual abstinence, but with its relation to personal health. And that relation is far more significant than the majority of educated people suppose. Broadly speaking, there is very little possibility of nervous derangement if the sexual life is healthy and satisfactory. Further, many persons will be surprised to learn that the bodily chemistry (metabolism) is influenced by sexual deprivation and by unsatisfactory marital intercourse. Furthermore, certain ailments can be traced to what Lord Dawson has aptly termed "clumsy sex love."

The period when the mating instinct is strongest in the majority of civilized people is after thirty, and it is in that decade that the deprivation of love is often intolerable. This is the case more especially among women, who so frequently develop neurotic illness, and are troubled with menstrual irregularities at that period. The abstinent man or woman at this time of life is often obsessed by erotic longing, and is as preoccupied with sex as the starving man is with dreams of food. This intense absorption may become morbid, and react upon the general health in a marked degree.

Havelock Ellis sums up his investigation of the

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results of sexual abstinence with the statement that in so far as abstinence "may be recognized as possible," it "is not incompatible with health; there are yet many adults for whom it is harmful, and a very much larger number for whom when prolonged it is undesirable." If this is accepted, we are immediately faced with the moral problem. And this problem will continue for some time to evade any solution which will be received as sound, ethically and scientifically, by the majority. The only safe practical counsel that can be given in accordance with the existing social code is the recommendation of early marriage.

There is ample medical evidence that marital intercourse is a preventive of certain ailments and a remedy for others. Marriage is unquestionably a means of maintaining health and preserving vigour in old age. The conjugal embrace, rightly understood and practised, promotes a zest of life, and stimulates the mental faculties. Clumsy sex love causes disappointment with wedlock, and often sheer unhappiness. For this reason sex psychology and hygiene are the most important subjects for the candidates to matrimony. Terrible cruelties are inflicted in marriage from a want of thought. The prohibition of thought upon sex among young women has tragic results in many marriages. I am convinced that the maintenance of health in senescence is associated intimately with a successful married life, physical and spiritual.

Many husbands shorten the lives of their wives,

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and inflict disease upon them through gross ignorance. Many husbands are tortured into illness by their wives, and die prematurely. Unhealthy conjugality is a common cause of serious physical injury and of psychic disturbance among all classes from the rich and cultured to the worst degenerates in the slums. I could cite instances from personal experience of the slow unpremeditated murder of married persons by their partners.

An emaciated wreck of a woman complained with tears that her husband was wearing her out by his sexual excess. The man was a satyr, who had been told that a woman cannot be injured in this manner. A middle-aged weeping wife told the story of a second husband who had never shown the least inclination to embrace her. A young wife on the verge of melancholia, and suffering physically, said that her husband neglected his marital duty. These are typical instances of disharmony among a very large number.

I agree with Dr. W. J. Robinson that an enormous proportion of civilized people are suffering from sexual disorders, apart from the two venereal diseases. It is a startling fact that the Ministry of Health reports, out of 70,000 births, a large number of mothers were so injured as to be made chronic invalids. Often repeated pregnancy is responsible for the breakdown in health of tens of thousands of women before middle age. Such results of the natural process of child-bearing are almost unknown among savages.

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An examination of the menstrual history of a thousand women by Tobler, in Germany, showed that the function is rarely normal in modern life, the chief symptoms being general indisposition, local pain, and mental and nervous anomalies. All these disturbances are held by Tobler to be pathological. Neglect of rest among young Englishwomen during menstruation is a cause of serious illnesses in later life. Fifty per cent. are said to endure painful menstruation. In New England, among two thousand schoolgirls, 75 per cent. had menstrual troubles, 90 per cent. were sufferers from leucorrhœa and ovarian neuralgia, and 60 per cent. unable to work at the menstrual period. This report was furnished in 1904 to the *Boston Medical and Surgical Journal*.

An appalling number of women, married and unmarried, are chronic sexual invalids. Dr. Mary Putnam Jacobi concludes that 46 per cent. of women are not "ordinarily healthy" ("The Question of Rest for Women"). The hygienic care of women during the critical menstrual cycle is better among most savage tribes than among the majority of cultured Western people. "It is among the white races alone that the sexual invalidism of women prevails," observes Havelock Ellis.

Inability for child-bearing is a very frequent cause of unhappiness among women, and the depression that results in some cases leads to drug-taking and alcoholic intemperance. Apart from organic defect there are several causes of sterility in women, and they are mostly preventable by hygiene. Inflamma-

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tions of the mucous membranes of the uterus, and congestions are hindrances to conception in women who are otherwise capable of reproduction. Gonorrhœa is an extremely common cause of barrenness in women. Prolapse of the womb and displacement often prevent conception, and these disorders are in many cases the consequence of carelessness and ignorance.

“Every gynæcologist,” states Dr. Lawson Tait, “must have listened to the histories given by suffering women of the miseries they underwent during the first six or eight months of their married lives.” Tait adds: “There is a false modesty on these subjects ingrained in our English life which has to be paid for in much suffering amongst women.” Clumsy sex love on the part of bridegrooms during the honeymoon leads often to minor or major injuries to the bride, and these are the source of trouble in some cases throughout the whole of married life. Some of the recorded instances of the complete physiological ignorance of the newly-wed are almost incredible. How long shall we continue to leave these grave physiological acts to “instinct” alone? The Germans are wise in their generation. They are endowing academic sexologists to enlighten the public in the science of sex.

Tait says that marriage, even without the occurrence of pregnancy, may establish the health of a woman afflicted with arrest of ovarian development. Healthy menstruation can be assisted by husbands, who should be taught that the function

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may be suspended by shock, overstrain, or anxiety. Rightly practised conjugal intercourse is a true therapeutic in many cases of female disorder. But the clumsiness of husbands and the ignorance of wives result in numerous physical and mental injuries. Miss Ettie Rout says that intelligent young unmarried girls and the young married woman are lamentably uninformed. "They are still almost incredibly ignorant as to the construction and mechanical working of the lower half of the body" ("Sex and Exercise").

The affectability and emotionalism of women cause much perplexity in young husbands. The right course is sympathy and understanding. The arousing of physical erotic desire in women is associated with a number of glandular processes that affect the mind. The body itself in the case of a virgin has to be educated to a new mode of life, and the psychic changes are often enormous and momentous. The man who is clumsy and impatient in the early days of marriage may imperil the health of his partner for life. The kindest of men may err terribly through ignorance of female psychology and anatomy.

There are numerous important considerations that do not even enter the mind of many married persons who wish to live healthily and lovingly. Hence at least eight out of ten married couples are troubled by dilemmas sooner or later. There is, for example, the precipitance of the man in orgasm, and the slower response of the woman, which, if not recog-

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nized and adjusted, causes much secret suffering. Unsatisfactory coitus is often a source of nervous trouble in both sexes. It should be known that the reflexes preceding intercourse are slower in the female than in the male sex. The congestion that is caused normally by the sexual act may become chronic in a woman, if the orgasm or climax is absent. Many of the diseases of women might be prevented by conjugal hygiene.

Frequent frustration after erotic excitement may not cause apparent injury in some persons, but if gratification is constantly withheld, a considerable number of both sexes develop nervous symptoms, neurasthenia, depression, irritability, and irascibility. After healthy normal intercourse, there is a sense of stimulation, cheerfulness, and heightened capacity for work; whereas unhealthy intercourse causes several depressing symptoms. Mosso states that sexual intercourse is a stimulant and a sedative. Excess is the paramount cause of impotence, and this disability brings other evils.

Among the disorders that may be corrected by hygienic marriage may be mentioned anæmia, undue thinness in some persons, menstrual irregularities and suppression, psychic sex impotence, ovarian irritation, endometritis, digestive derangement, anxiety neurosis, neuralgia, certain heart affections, and mental depression. Various disturbances of health may arise from prolonged continence of the married. Dr. Isabel Hutton refers to the "devastating" effect of abnormal restraint in married intercourse, and

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says that such restraint "frequently results in nervousness and general ill-health, and sometimes in nervous breakdown and neurasthenia" ("The Hygiene of Marriage").

The question of birth control and personal and national health is of very great importance. I do not intend to attempt in this limited space an adequate survey of contraception in all its bearings. There is now a fairly big literature on the question, to which I must refer the readers who wish to acquaint themselves with all that has been said for and against. Personally, I regard the control of reproduction as a necessity in most of the advanced nations, the reasons being economic, social, hygienic, and eugenic. The ideal to strive for in family and racial life is the production of quality, and not mere quantity. "The more the merrier," is a lie when applied to an over-populated degenerating community.

It is hardly probable that any thoughtful person will deny that a family of three sound children is more to be desired than a family of eight or ten weaklings, doomed to suffering and unfitted to become parents of healthy offspring. Nor will anyone except certain misguided fanatics declare that it is right for a feeble woman's health to be utterly shattered by bearing a number of unwanted children. There should be an interval of two years between the birth of each child in a family, in the interest of the mother, the child, and the State.

The control of conception becomes imperative from the moral and humane standpoint, when one or other

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of the parents is syphilitic, insane, or certifiably feeble-minded, or the wife is threatened with disablement or death by pregnancy.

There are certain objections of a hygienic nature to some methods of family limitation. Complete abstention from intercourse is one of them. Some of the mechanical devices may in specific instances cause minor injury, and other devices may in some cases contribute to nervous symptoms. There are now, fortunately for national health, several clinics where information from qualified medical men and women may be obtained upon the most reliable and non-injurious methods of contraception.

The advantages of national birth control are (1) the facilitation of marriage at an age when both partners are most vigorous; (2) diminution of prostitution through early marriage by a lessening of the economic hindrance to marriage; (3) the production of healthier offspring through a spacing out of births; (4) protection of women who are not physically fit to bear children without grave risk to mother and child; (5) prevention of inherited syphilis when parents are infected; (6) contraception would diminish the ever-increasing prevalence of deliberate abortion.

Marriage is often recommended as a remedy for neurotic illness. This counsel is frequently misleading, and may aggravate hysterical symptoms. The first course for the nervous invalid is to get well through scientific and psychological treatment. If marriage is not a cure for neurosis, it may be regarded

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as a preventive in some cases. But everything depends upon the conditions of conjugal life. Unhappy matrimonial experience is one of the hardest trials for man or woman, and the most successful marriages involve considerable self-discipline, compromise, and delicate tact.

The care of mothers is of supreme importance for the preservation of health and well-being in old age. Among the working-class, and especially among the hopelessly impoverished, a vast number of mothers are so overworked in domestic labour and toil in industrial occupations that they are worn out and aged at forty-five. The neglect of maternal hygiene is instanced by the fact that a few years ago the infant mortality in the healthy town of Guildford, among the whole population, was 65 per thousand, while in Burslem, where a large number of the married women labour outside of the home, the rate was 205 per thousand.

Health congresses have decided that "every working woman is entitled to rest during the last three months of her pregnancy." Our industrial system affords no opportunity for the sufficient rest of mothers. The sacrifice of womanhood is a glaring crime of "civilization," and an example of our muddled morality and erratic humanitarianism. The degenerates, the imbeciles, and the vicious are much better protected than the mothers of the people. What is the value of a civilization that places money before national and racial health and happiness? The care of mothers among savage races is frequently

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more scientific and hygienic than among the masses of the industrial nations. We are "practical" in England in almost everything but national health, which is the primary essential for well-being.

The idea of training young people for the responsibilities of parenthood is treated as a joke, or an improper suggestion. The highest work of woman is said to be motherhood. The average woman is entirely untrained in maternity when she marries, and the average man knows scarcely anything of the hygienic duties of a husband and father. "We procreate to-day as they procreated in the Stone Age," said Pinard, of the Academy of Medicine in Paris. We are infinitely more solicitous for the reproduction of fine race-horses and dogs than for producing fine human beings.

Chapter XXVI Some Thoughts of a Sexagenarian

Pleasure and Pain

I READ lately that Professor Munsterberg, the psychologist, wrote down every day, for some months, the number of pleasurable and unpleasurable emotions that he experienced. The average proved to be forty pleasant to sixty unpleasant sensations. This is perhaps more encouraging than Byron's gloomy: "Count o'er the days from misery free," or Leopardi's unqualified pessimism. But does Munsterberg's experiment prove that human life in general has more pain than pleasure, more sighs than smiles? Would not many people declare honestly that they have known more happiness than unhappiness? What would be the result of a questionnaire? I wonder.

Is Youth the Happiest Stage?

When we are young we can hardly imagine that we shall one day find ourselves grey and at three-score years. Sixty seems divided from us by an eternity, and we look upon the men and women of that age as human ruins. We cannot realize in

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youth that an old man can feel like a young man, and act like one. If he tells us that he can, we think it is a mere pose. More preposterous to the young mind would be the avowal of a sexagenarian that he *feels younger* in some respects than he did at twenty-five.

Knowledge of life brings certain disillusionments and disappointments, but there is a wonderful compensatory rejuvenation of the mind, that comes with breadth of experience. The world is neither quite so good nor so bad as we imagined it to be. We have ceased to be disappointed with the behaviour of relatives and friends, because we know *ourselves* better, and are more tolerant. We have learned to be grateful for the wooden shanty that we have built after years of labour, and to sigh no more for the palace of our immature dreams. Even "the ever-returning spring" seems more wonderful year by year, and we hear the first trill of the blackbird, and discover the first white violet bud, with a keener rapture than we knew as children. We enjoy more because we know more.

Probably youth is not the happiest time in life, though it is often called "the halcyon days." Principal Stanley Hall's masterly volumes on "Adolescence" show that a host of young men and maidens pass through agonies of soul, and are haunted by terrible fear of the new force that arises within them. Dr. A—— tells me that he became almost insane when he was fourteen through a sense of guilt for thoughts and longings that he imagined were

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unnatural and sinful. Timidity, awkwardness, self-consciousness often make youth a trial.

As for romance and adventure, I have had more of them since my fiftieth birthday than in "the ardent days of youth." Most young people do not know how to be romantic or adventurous. Adventure for them is something extraordinary, in a melodramatic setting, and they have not learned to discern the romantic and the poetic in the commonplace. The miracles and the wonders of daily life are unheeded by most young folk.

Walking and Health

Many men and women of middle age among my friends and acquaintances say that they "can't walk." There are exceptions. Old T——, aged seventy-two, walked up and down Snowdon, and enjoyed himself thoroughly; and W——, who is older, climbs Cader Idris once a year as a means of ascertaining whether he feels old. Yet there are a vast number of hale-looking people who grumble if they have to walk a mile to the railway station. Comparatively few men walk to business in these days. Motoring has caused atrophy of the leg muscles in a huge number of the middle class. There is a revival of the walking tour among young shop assistants and clerks. One meets them with knapsack and stick at holiday times. But the sexagenarian long-distance walker is a rarity to-day. At sixty, one of my great-uncles walked from Newbury to London in a day.

I attribute my sound health in a large degree to my

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life-long love of walking in the country. I can still tramp twenty miles in eight hours, with only an enjoyable tiredness in the evening. On the following day I seem to breathe more freely; I am more cheerful, and keener for the day's work, and I have pleasant mental images of hills and glens.

Anticipating Decrepitude

So many men and even more women think that they *ought* to feel old at three-score years. This expectation of senility at what should be the comparatively young age of sixty—in the biological sense—hastens the symptoms that are feared. We see many people *acting* old in their habits, their gait, and their slowness, as though they were cast for the part. The man who repeats constantly "I am getting old" lessens his chance of renewing his youth. The lymphatic, more than the nervous, energetic types, are wont to dodder and potter after sixty. They sit about, and procrastinate, and let things slide, while they talk about being "too old" to do this or that. "A man should not counterfeit to be sicke," as Montaigne says, or he will soon become really infirm. Hypochondria is common in the old, especially among the idle and well-to-do, and "the flight into illness" is frequently a manifestation of senile egotism. If the aged selfish woman feels herself out of the picture, and neglected by her family, she develops a vague complaint, and becomes an interesting invalid. "Never tell my husband that he

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looks well," whispered a woman to me. " Nothing makes him so depressed as that."

The Old and Love

The old man or woman newly in love is an object of common ridicule. For that matter, the mass of English folk affect to laugh at love at any age. Does not love interfere with business? The dotard, according to the dictionary, is " one who is foolishly affectionate." But the virile lover of sixty is not in that category. Love is an art, and all art is long. Forty years of love-life is only an apprenticeship to Hymen for many married persons. The capacity for loving one of the opposite sex with a mature passion is not rare, and not abnormal. Spiritual sex love is undying in many instances, as biographies show. Passion may die a premature death at forty, or it may be felt for the first time at that age, as in the case of a novelist friend of mine, who was previously considered immune to sex emotion.

There are old wedded couples, seventy or more, who still love with the corporeal as well as spiritual sense. I have known several instances. We read that desire is mercifully extinguished by age, and that " a beautiful, calm friendship " succeeds the distressful years of the enjoyable torments of passion. The physiologists say that the woman of fifty-five is passion-proof, and that a man ten years older is naturally emasculated. The theologically-led approve this dictum of science. It is well, they say, that " the flesh " should be finally subdued.

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The truth is that a considerable number of both sexes, in late middle age, experience a recrudescence of erotic ardour, and that strict celibates find themselves confronted by a problem which they imagined time had solved. This flaring-up is apparently erratic Nature's intimation that the fire will soon be quenched. In any case, it is a normal phenomenon of the psyche and the soma, whether we like it or not.

Nature's main purpose is the production of the seed in plants, animals, and mankind. In a wet summer, when I lived in Devonshire, an old stump of an apple tree in my garden, which I believed to be dead and decayed, sprouted a shoot that bore leaves and sexual organs in the form of blossoms. The vagaries of Nature are indeed past finding out!

Every observant physician knows that the self-imposed abstinence of some ageing married couples is a contributory cause of increased blood pressure, mental depression, irritability, and quarrelsomeness. Dr. R—— and his charming wife are like young lovers. They are over sixty. Why not? How different from the indecent parlour prudes, and the lecherous old *roués* one meets in the West End!

Large Feeders

"Hearty feeders" seldom enjoy good health after middle age. The "good trencherman" usually begins to look old at fifty. He has an unpleasant, congested, red face, with a purplish tinge of the nose. His breathing is heavy, and he is not so resistant to colds and bronchitis as the moderate eater. Several

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of my alimentative friends have died from pneumonia in the fifties. One need not be a Spartan in diet. The happy mean is between incessant gorging and under-feeding. There is some truth in the saying that over-eating kills more people than intemperate drinking. Often, the sexagenarian gourmandizes and drinks heavily as well. Old age need not be unæsthetic. I think of the quite unnecessary grossness, the boils and pimples, the toxic symptoms of J——.

Egotism

Old sere and yellow leafer\$ must not take themselves too seriously. They should laugh at themselves sometimes, look in the glass, and say: "Am I more wonderful and important in the cosmos than the little flower in the crannied wall?" Who knows? Art? Possibly. But how transcendent is Nature's art!

Fanatics of Diet

The rabid vegetarian is an interesting study. He declaims against "the disgusting practice of kreophagy" (corpse-eating), and exalts the rabbit above the nobler fox on ethical grounds. Equally fanatical is the beefy advocate of plentiful meat eating as the secret of health. The vegetable, egg, and milk eaters undoubtedly excel the heavy flesh eaters in modern athletic contests. Their stamina is superior, as records prove. They have science on their side. George Bernard Shaw is, intellectually and physically, a walking testimony to plain living without the flesh-pots.

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A Hobby for the Rich Old.

I like the story of Epictetus who rescued an infant that was about to be dispatched, as a check on over-population, and brought it up in his own home, with the aid of a nurse. Here is a suggestion for the prosperous, childless married folk, bachelors, and spinsters, who are suffering from boredom in old age. What an interesting hobby! One might entertain a genius unawares.

Children as Companions of the Aged

Victor Hugo wrote a book, "The Art of Being a Grandfather." It is an art. Hugo said that the grandfather should be loving, sympathetic, and indulgent to children. The lonely old man devoted himself to the happiness of Georges and Jeanne. Hugo felt young until the last hours of life. His secretary was amazed at his employer's extraordinary energy in the seventies. He refused to wear an overcoat, and liked a ride in a balloon. This youthful septuagenarian romped like a boy, and was younger in senescence than he had been at thirty. A tribute to the value of energetic exercise of the mind.

No Wish to Live Long

C. H——, a brother writer, loves the vintage well, and drinks more of the juice in a day than I take in a week. It is not my business to reprove C. H——, but when he asked me the frank question: "Do you think I drink too much?" I replied: "For your

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health, yes." "Ah," said he, "you'll tell me that if I drank less, I might add another ten years to my life. Well, I don't want those ten years."

A delightful woman, something of an invalid, but cheerful, tells me that she hopes she will not live to see sixty.

The Simple Life

Camping out, sleeping out of doors in summer, and the week-end cottage are means of counteracting the injurious results of town life. I read in *The Daily Mail* that a townsman of fifty-seven bought an old boat, with a sort of a cabin, moored it in an Isle of Wight stream, and lived the simple life, with immense benefit to a weakened constitution. How much healthier and pleasanter than life in one room in a "long, unlovely street."

A DAY will come when the regeneration of the race, public health, and personal hygiene will be considered of higher importance than mere material prosperity. The reforms will be forced upon us after we have passed through a period of decline, and when everyone is scared by the prospect of imminent national decay. Scientific hygienists have raised their voices for a century, and warned the people of the perils of insanitary living; and legislators have, now and again, instituted measures for the improvement of national health. Nevertheless, there are appalling numbers of the population in the C3 class, a multitude of chronic invalids, and a host of the insane and mentally defective.

Town sanitation and a pure water supply has done much; but the fact remains that good drains and uncontaminated water do not ensure the health of a vast proportion of the British Islands. Sanitation is by no means perfect in many densely populated centres. For example, at the time when Mr. B. Seebohm Rowntree wrote his inquiry into the public health of York, 228 houses in that city had only

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33 closets among them, and only 30 water taps for 442 dwellings. In the poorest area of York, 247 children died out of 1,000 before reaching the age of twelve months, and more than half of the survivors were puny, dirty, and suffering from sore eyes, hip disease, and swollen glands.

"It is but necessary to take one walk through its mean streets to see that St. Pancras is breeding a degenerate race," states Sir Leo Money, in "Riches and Poverty." We have not learned how to dispose of town refuse, and recent accounts in the newspapers describe immense mounds of filth and rubbish, dumped down in the vicinity of towns, exhaling horrible smells, and infested with myriads of flies and thousands of rats. In some of the manufacturing towns of the North and the Midlands, there are "tens of thousands of houses built back-to-back, so that there is no passage of air through them."

There will be a gospel of health in days to come. It will not only be preached by health experts, but by economists. Hygienic research in every branch will be subsidized by the State. Bio-chemistry will be developed enormously. There will be chairs of dietetics, eugenics, and sexology, and law-makers will cease to scorn the counsels of scientists. Sheer fright will compel the masses to listen to the physiologists, doctors, and chemists.

An arousing of the national conscience will bring an advance in the science of human breeding, not on "stock-yard" lines, as the ill-informed critics of eugenics delight in misrepresenting, but through

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recognition of the responsibilities of parents to their children, the coming generations, society and the race. There will be more enlightened care of the mothers of the nation.

Endocrinology, the study of the ductless secreting glands, is in the first stage. Before long, the part played by these glands in human destiny will be more generally recognized, and means will be discovered for conserving their efficient and balanced working. There is little doubt that organotherapy will be greatly developed within the next decade. Already the results, in the alleviation of feeble-mindedness and certain physical disabilities, give promise of much greater triumphs of therapy.

Birth control will be taught widely in endowed scientific clinics. It is probable that the economists and financiers will discover ere long that it does not pay to maintain a vast number of incapables. There will no longer be a terrifically high death-rate as a concomitant of an appallingly high birth-rate.

Prostitution will dwindle, as present indications show, and venereal diseases will be rare. There will be a higher ideal of the commerce of the sexes than exists at present. This will arise out of the ashes of the existing code of sex morality, which is Procrustean in its harsh severities, and directly and indirectly fosters vice. The monogamic form of marriage will in all probability survive; but divorce will be rendered much easier, and less costly than it is now. The main principle in the new sexual ethics will be a wider liberty, but a much higher regard for love.

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We shall shrink from injuring or degrading another person in a sexual relationship.

There will be more garden suburbs on the outskirts of big towns, and an increasing number of the population will live in the country for economic and health reasons. There are signs that some of the towns will become less congested in the near future. It is very unlikely that we shall permit industry to blacken and blast large tracts of England, and to pollute the air with coal smoke. Electricity will be used to a much greater extent in factories, and we are probably on the eve of discovering a larger supply of radium in the Empire.

Economic conditions will have to be adjusted to a gradual slowing down of the present rush and hurry. We shall learn how to gain more leisure and how to use it. Absolute necessity will cause a modification of the present appraisalment of money and luxuries, and ultimately we shall have more comforts and fewer superfluities.

Nervous illness of all kinds will increase until we have learned how to apply the new psychology in education in the nursery, the school, and the universities. There will be an immense broadening of education, with a lessening of resistance to science and a disappearance of the proscription of thought. We shall refuse to be led by the nose by myopic, timid reactionaries, hide-bound academic pundits, worshippers of superstitions, and enemies,

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